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JIDA

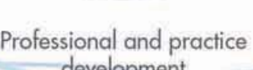
Journal of the Irish Dental Association
Iris Cumainn Déadach na hÉireann

A lot on your plate

Mandibular implant-supported overdentures: attachment systems, and number and locations of implants – Part I

CONFERENCE PREVIEW

Professional and practice development



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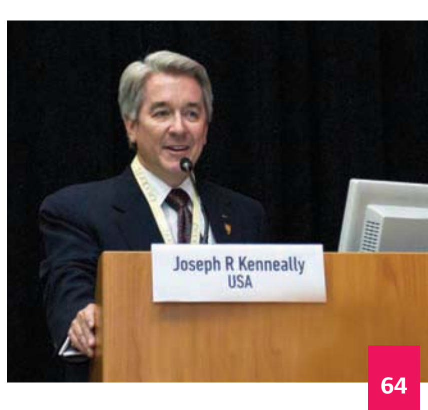

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EDITOR **Professor Leo F.A. Stassen** FRCS (I), FDSRCS, MA, FTCD, FFSEM, FFDRCSI, FICD

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EDITORIAL **Ann-Marie Hardiman, Paul O'Grady**
DESIGN/LAYOUT **Tony Byrne, Tom Cullen, Ruth O'Sullivan**
ADVERTISING **Paul O'Grady** paul@thinkmedia.ie

Irish Dental Association Unit 2 Leopardstown Office Park, Sandyford, Dublin 18.
Tel: +353 1 295 0072 Fax: +353 1 295 0092 www.dentist.ie
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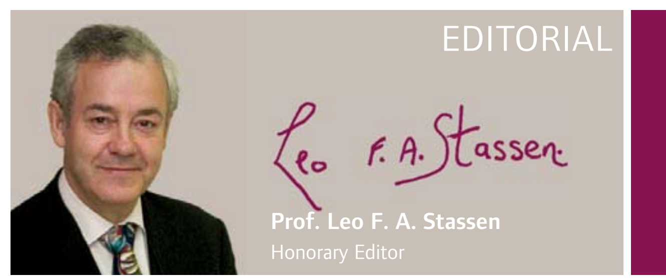

Face the change

Change is a theme in many of the articles in this edition of the *Journal*.

Like virtually every aspect of modern life, dentistry is changing and at a rate that is, at times, challenging for all of us. The gender imbalance so evident in the superb picture of the TCD class of 1980 that accompanies Dr Garry Heavey's excellent and thought-provoking article on changes in dentistry, has long gone. Indeed, we report on the recent meeting of the Women in Dentistry (WIDEN) group, also in this edition. The questions posed at the end of Dr Heavey's article have profound implications for our profession and deserve our close attention.

Continuing professional education has always been essential, but as the pace of change continues to accelerate (will it ever slow down?), participation in CPD becomes a defence against redundant skills. The Annual Conference of our Association is the single biggest CPD event of the year. The programme is, once again, outstanding and I am personally looking forward to hearing both the *Journal* lecturer, Professor Tim Newton, and Dr Ben Goldacre, who gave such a good interview to Ann-Marie Hardiman in the last edition of the *Journal*. There is a particularly strong programme of Pre-Conference courses with an impressive mix of Irish and international course leaders.

The Annual General Meetings of the Union and the Association also take place at the Conference and there is an excellent presentation, in infographic form, of some of the highlights of the annual reports of both bodies from Fintan Hourihan in the members' only pages in the centre of this edition.

One of our own

Our thanks are due to our former Editorial Board colleague, Dr Tom Feeney, for his assistance in securing an interview for the *Journal* with the President of the International College of Dentists, Dr Joseph Kenneally. As you might gather from the name, although he is USA born and educated, we can consider him one of our own as his grandfather and grandmother were both born and raised in Ireland. Dr Kenneally is a distinguished practitioner and his views on the changes to dentistry in his lifetime are well considered, as are his views on fluoridation. We look forward to welcoming Dr Kenneally to Ireland in October when he presides at a meeting of the ICD in Dublin.

Clinical and peer-reviewed articles

One of the really pleasing developments in the production of the *Journal* in recent times has been the introduction of relevant, locally-sourced, clinical features. We asked three members of our Editorial Board to judge the first year's articles and the winner, amid a very high standard of articles, was Dr Abigail Moore. Our congratulations go to Dr Moore and our sincere thanks to all the authors who provided such excellent information for our readers. In this edition, we are grateful to Drs Padraig McAuliffe and Elaine Purcell for their clinical feature on 'Sleep apnoea for the dental practitioner'. Interestingly, they note that obstructive sleep apnoea affects approximately 5% of adults.

Our peer-reviewed articles are on 'Smoking cessation and the role of the general dental practitioner' and 'Mandibular implant-supported overdentures'. In relation to smoking cessation, we as dentists have a role to play in helping our patients to understand how important it is for their oral health (as well as their overall health) to give up the cigarettes. And given that it is estimated that more than 50% of all smokers visit a dentist every year, we have an ideal opportunity to inform them of the negative effects of smoking on the oral cavity.

In our second article, Dr Abdulhadi Warreth and his colleagues, in the first part of a two-part article, provide an overview of options available to restore the mandibular edentulous arch with dental implants. Different types of attachment systems, their features and drawbacks are also reviewed.

I look forward to seeing as many of you as possible in Cork.

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Dr Peter Gannon
IDA President

A year of self-discovery

Now more than ever it's important to get involved in your Association.

It has been a busy year serving as President of the IDA and also continuing to run a single-handed dental practice. This has only been possible because of the work of the staff at IDA House, and the advice and support of the many IDA members who serve on various committees of the Association. I wish to thank in particular Drs Sean Malone and Nuala Carney, who will stand down from the Board next month after outstanding service as Vice President and Honorary Treasurer, respectively.

I have had the pleasure of representing the Association at several gatherings over the year and have met many colleagues who work in Ireland and overseas. I have learned a lot and realise that I can continue to change and to improve as a dentist.

Standards and responsibilities

Dentists remain the biggest drivers of improving standards in their own work and in promoting good oral health among their own patients. We are trusted and well regarded by our patients. Thankfully, many private practices are becoming busier after a number of difficult years and have survived because of the loyalty of these patients and the value they place on their oral health. It is important that we continue as an Association to put pressure on politicians, the Department of Health and the HSE to recognise their responsibilities and to improve access to dental care for those most in need. This often seems like a task without reward, but we must speak up for our patients. The Department of Health is preparing a new National Oral Health Policy, which will inform Government policy in the coming years. It is very important that all dentists give their views to any consultation process. Equally, the IDA needs to continue to hear the views of its members on the difficulties of providing care, in both public service dentistry and private practice, and more importantly, what changes may bring improvement.

The IDA is close to 100 years old. It has changed and will continue to change, and must remain relevant, effective and important to its members. A corporate governance review of the organisation is underway, to assess and improve the organisation, and to ensure that it meets corporate standards. Our recently completed Strategy Plan is being implemented to improve services for members, and to raise the public profile and public impact of the Association. We will get out what we put in and I would encourage any dentist to get involved in the organisation, something I myself have found to be very rewarding.

Services and guidelines

A review of the Dental Complaints Resolution Service is underway and a survey seeking the experiences and views of IDA members has contributed to this. Similar services in New Zealand and Hong Kong have been effective in reducing the number and size of legal claims against dentists and we hope that this will also be the case in Ireland. I hope that an efficient complaints service and a tougher approach by indemnity organisations towards dentists with regular legal claims against them will help to reduce our insurance premiums. Finally, I understand that the new Dental Council guidelines on infection control may be near publication. The Association put extensive efforts into representing the views of the profession on this issue, highlighting the need for evidence-based and pragmatic advice that recognises the cost burden facing the profession, and weighing this against the level of risk faced by both dentists and patients. We all await sight of the new guidance with great interest, and the presentation by Dr Nick Armstrong at this year's conference in Cork on this very topic should be very informative. I have no doubt that this issue will remain a top priority for the Association under my successor, Dr Anne Twomey, to whom I offer my congratulations and full support.

From left: Dr Sarah Brody; Dr Frances O'Callaghan; and, Dr Jane Renehan.

Dr Patricia Cunningham and Dr Eimear McHugh.

From left: Drs Maeve O'Hare; Eleanor McGovern; and, Mary McGeown,

Dr Hannah Granville and Dr Susan Kiely.

From left: Drs Eimear Morgan; Maria Jennings; Yvonne MacAuley; and, Abigail Moore.

Dr Kathleen Lynch and Dr Kathryn Browne.

From left, Dr Linda Elliott; Dr Rhona Mahony; and, Dr Nuala Carney.

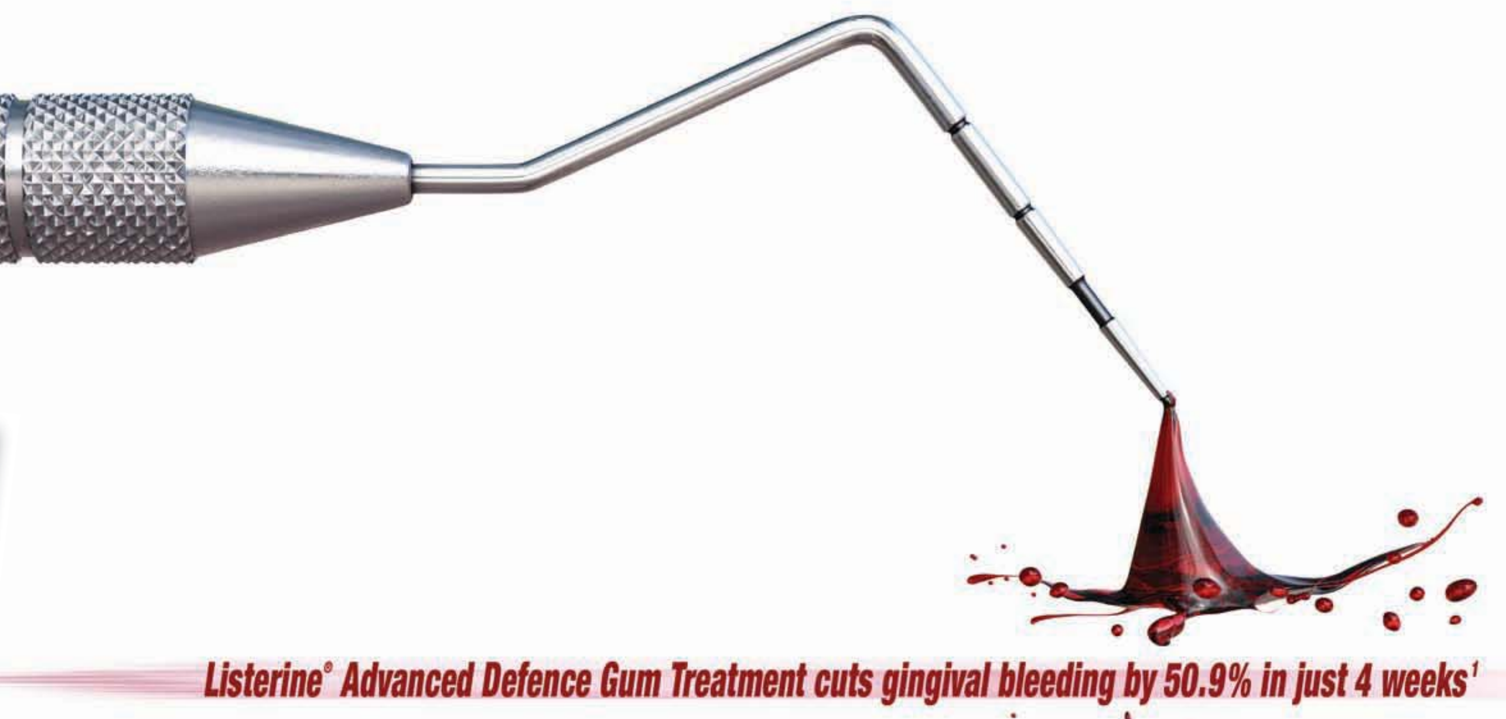
Inspiring women

The IDA's Women in Dentistry (WIDEN) group held a very successful meeting in the Dublin Dental University Hospital on February 24. A large group met to hear an inspiring speech from special guest Dr Rhona Mahony, Master of the National Maternity Hospital, Holles St. Dr Mahony, who is the first female master of the NMH, is a consultant obstetrician and gynaecologist, and a specialist in foetal and maternal medicine. She is also married to a dentist in private practice, so had an excellent insight into the ups and downs of the dental profession.

Dr Mahony gave a talk entitled 'Beyond dancing at the crossroads', a whistle stop tour through areas of Irish history that have had a particular impact on women's lives. She pointed out that ancient Brehon law gave extensive rights to women, but over the centuries these were eroded to the point where, well into the 20th century in Ireland, women could not serve on juries, obtain legal contraception, or stay at work after marriage. While the legal position with regard to equality has improved enormously, she pointed out that barriers still remain. These days, however, the barriers are less tangible, and centre on the practical difficulties in achieving a work–life balance for women whose careers often enter their busiest phase just as they also reach the stage of wanting to start a family.

In the very frank and insightful discussion that followed, Dr Mahony spoke about difficulties she had encountered in her career and about the need for women to support each other's choices, whether to pursue a career outside the home, or to take time out to raise a family. With over 9,000 deliveries a year in Holles Street alone, she felt that as a society we need to see pregnancy and childbirth as a normal part of life and work, and plan for our workplaces to cope with this. She felt very strongly that until family and parenting are seen as a dual responsibility of both partners, particularly in terms of parental leave, then inequalities will remain.

Dr Mahony's presentation was warmly received by those in attendance. WIDEN committee member Dr Nuala Carney thanked her for her honesty and felt that the talk was very fitting for the group, whose mission statement includes the aim of encouraging and supporting women to enhance their career satisfaction and become leaders in their profession, while maintaining a successful work–life balance.



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References:
1. Bleeding Index Reduction DOF 1 – 2013 (LAEBBA0001), 50.9% reduction in whole-mouth mean Bleeding Index at 4 weeks.
2. DOF 2 – 2013 (UNKPLT0006).

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Advanced Defence against gum disease

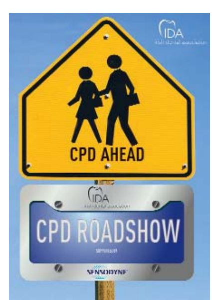
The write stuff – Clinical Feature of the Year

The Editorial Board of the *Journal* is pleased to announce that the winner of the Clinical Feature of the Year Award for 2014/15 is Dr Abigail Moore. The winning feature was chosen by the judging panel of three members of the Editorial Board – Drs Michael Crowe, Mark Kelly and Ciara Scott. Dr Moore won the award for her clinical feature entitled: 'Management of an anxious child in the dental setting – a step-by-step approach' which was published in the February/March 2015 edition. It was chosen from all the clinical features published in the *Journal* in the period April 2014 to March 2015. Abigail is pictured here receiving her award from Professor Leo Stassen, Editor of the *Journal*.

Prestigious dental researchers

At the recent Conference of the International Association for Dental Research in Boston were (from left): Dr John O'Keefe, with former Association Presidents Professor Helen Whelton; Professor John Clarkson; and, Dr Bill Bowen.

CPD roadshows come to an end



Our current CPD Roadshow Programme has now finished after a very busy and educational three years. Over 500 delegates attended the workshops in six different locations nationwide.

On behalf of all members, the IDA would like to extend sincere gratitude to all the speakers on the CPD Roadshow Programme. Without their generous giving of their time and expertise, we would not be able to run these workshops in the regions. Also, a big thanks to all those who availed of these CPD workshops, and participated in the many interesting discussions and debates.

Finally thank you to GSK Sensodyne for their generous sponsorship of the programme over the last two years, and to Colgate for their sponsorship of year one of the programme. More details on the next phase of our programme of CPD in the regions will follow soon.

New Xylitol research from Cochrane

New research concludes that there is limited evidence to show that xylitol is effective in preventing dental cavities in children and adults. Xylitol is a natural sweetener that is widely promoted globally, and can be found in a wide range of everyday products including sugar-free chewing gum, toothpaste, gels, lozenges and sweets. Xylitol is a popular sugar substitute in sweets and it is already known to cause less damage to teeth than sugar. It has also been suggested that the addition of xylitol to products may help to prevent tooth decay by stopping the growth of decay-producing bacteria. However, according to new evidence published in the Cochrane Library there is little high quality evidence that it is beneficial in the fight against tooth decay, which affects up to 90% of children and most adults worldwide.

The authors gathered together data from 5,903 participants in ten different studies. In most cases, the studies used such different methods that the researchers could not combine the results to create a summary effect estimate. Based on information from 4,216 school children who took part in two Costa Rican studies, they found low quality evidence that levels of tooth decay were 13% lower in those who used a fluoride toothpaste containing xylitol for three years, compared to those who used a fluoride-only toothpaste. For other xylitol-containing products, such as xylitol syrup, lozenges and tablets, there was little or no evidence of any benefit.

Lead researcher, Philip Riley of the School of Dentistry at the University of Manchester, said: "This Cochrane review was produced to assess whether or not xylitol could help prevent tooth decay in children and adults. The evidence we identified did not allow us to make any robust conclusions about the effects of xylitol, and we were unable to prove any benefit in the natural sweetener for preventing tooth decay. The limited research on xylitol-containing toothpastes in children may only be relevant to the population studied. He added: "For other products containing xylitol we were unable to determine whether they were beneficial. We were particularly surprised to see such a lack of evidence on xylitol-containing chewing gums."

Several of the studies included in the Cochrane review did not report sufficient information on the side effects of xylitol, which can include bloating, diarrhoea and laxative effects. Philip Riley remarked: "We expected all studies to report adverse effects as an outcome. Sugar-free gums, sweets, mints and other products are well-known for their gastrointestinal effects and these should be clearly reported in future studies."

A little alm twisting

Dr Denis Daly, President of the Irish Dental Benevolent Society, is a man on a mission, as we recently found out.

Rathfarnham-based general dental practitioner Dr Denis Daly wants to ensure that all dentists are aware of the Irish Dental Benevolent Society (IDBS). He especially wants dentists to know what the Society does for dentists and dentists' families in difficult times.

"Typically, the Society would, in the past, have helped widows of dentists who had died suddenly, relatively young, without adequate insurance, to provide for their families. The Society helped with small but vitally important regular payments," says Denis. In more recent times, he points out, the crash of the economy and the withdrawal of State support for dentistry has put dentists under more pressure and, when perhaps combined with unforeseen illness, left some dentists in very straitened circumstances.

"There are a lot of dentists whose practices would have consisted of one-third medical card patients; one-third PRSI patients; and one-third private patients. The first two-thirds got effectively wiped out by Government cuts, and private patients were much less inclined to spend any money that they had managed to hold on to in the crash. This resulted in catastrophic drops in income for some practices resulting in subsequent pressure, hardship and illness. We have had several cases only brought to our attention at breaking point, i.e., the point at which the dentist was threatened with no longer being able to put food on the table."

The Society can help with protecting the family home mortgage, helping to educate dependents, helping to meet health costs such as health insurance or nursing home costs, helping with insurance premiums and helping with once off expenses.

Reluctance can be an issue

Some of the delay in coming to the Society is due to a reluctance to seek help but in other cases, says Denis, there was just no awareness that the IDBS existed and can help in an emergency. He comments: "While we did a campaign to raise our profile about 15 years ago, we think there are many dentists who have entered the profession since then who have no idea that our Society exists and can help. We need them to understand that we are available if they are in financial difficulty – they can contact any member of the IDBS Committee."

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"We need your help"

Denis Daly is unequivocal: "If everyone gives just a little, there will be no problem." However, the reality is that there is a problem. "The Society needs to replenish the funds it has used up in assisting dentists through the downturn. The good news is that a little helps a lot. The Society only needs dentists to make a small contribution. Donations of just €10 a month or €100 a year from everybody would go a long way. Anything over €250 in a year qualifies for a tax rebate to the Society as it is a registered charity. Can I appeal to all dentists who can afford it to make a regular donation to the Society by standing order? We need your help."

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Coming home

The ruling body of the International College of Dentists is meeting in Dublin in October, and the College's international President, Dr Joe Kenneally, has a strong Irish connection.

Dr Joseph Kenneally is many things. He is a general dental practitioner in the town of Biddeford in the state of Maine in the United States of America. He is a former Vice President of the American Dental Association. He's a family man with adult children. He is also the 2015 President of the International College of Dentists (ICD or just College). With 12,000 members, it is the largest and oldest honorary society of dentists in the world. And it is in his role with the ICD that Joe believes that his life, and his family story, will come full circle in October of this year. He will come to Ireland to preside over a global meeting of his profession in the country that his grandfather, a blacksmith, left in the early part of the last century. We in Ireland sometimes underestimate the emotional ties of the diaspora to our country. We shouldn't. Dr Joe Kenneally is a man who has achieved a great deal in his life and it is evident from talking to him that it means a great to him to return to Ireland as President of the ICD.

ICD in Dublin

Joe Kenneally comes to Dublin with an agenda – the agreement and adoption of a strategic plan for the future of the ICD. It's a big ask for an organisation that is so multicultural. "Some of our members place great emphasis on leadership; others on the honour; and others again on our humanitarian work. It's a challenge to get all of them to agree to a single strategic plan," says Joe. However, the underlying drive is for growth. The ICD currently has about 12,000 fellows. Joe believes that the top 2% of dentists in the world should be members; so there is room to grow to about 72,000 members globally.

The ICD is a huge organisation, being divided into regions across the world. The European Section is currently headed by well-known Irish dentist Dr Tom Feeney (a former member of the Editoral Board of the *Journal*) and it was Tom who headed the drive to bring the ICD event to Ireland. In fact, it consists of both the 60th Annual Meeting of the European Section of the ICD, and the annual meeting of the International Council of the College. The formal meetings take place at the Royal College of Physicians of Ireland, Trinity College, the Royal College of Surgeons of Ireland, and the Shelbourne Hotel. The key social event is the Gala Dinner in the Royal Hospital Kilmainham on Saturday October 10.

Dr Kenneally feels that dentistry is in a period of strong growth and development in the advanced nations of the world. He cites the advent of electronic technology as having a transforming effect on dental surgeries, with the ability to use digital technology to see images in three dimensions as a huge help to dentists.

In the less developed areas of the world, there is a drive to raise standards and get care to people. The ICD has a strong humanitarian role and often partners with local organisations to get oral healthcare to places where no such care has previously existed.

Paul O'Grady
Journalist and managing editor at Think Media

paul@thinkmedia.ie

Joe's journey

Joe Kenneally is a second-generation Irish American. His grandfather was a blacksmith who emigrated to the United States from Tipperary. With the classic determination of hard working people, Joe's dad became a Professor in Arts

ICD International President-Elect for 2016 Dr Phillip Dowell of the UK (left) with Dr Lisa Howard and Dr Joe Kenneally.

and the Humanities in a New England college. His uncle, however, was a dentist and guided Joe into the profession. As with most professions in the USA, dentistry is a postgraduate qualification. Joe studied medical biology for his primary degree at the same college where his father taught, and then proceeded to the Dental School at Tuft's University in Boston. Qualifying in the early 1980s, he went to work in a dental practice for two years. He then set up his own practice in Biddeford, Maine, the very same coastal town where his uncle was in practice. There was, he says, never any sense of competition between them – rather his uncle continued to encourage him.

Fluoridation

Joe was quickly invited to join the Rotary Club in Biddeford and each new Rotarian is asked to make a presentation. Joe decided to make his on the benefits to oral health of community water fluoridation. He must have made an impression because he was then asked to chair a committee to lobby for fluoridation of the drinking water in the Biddeford area. Despite some naysayers telling him that he would not succeed, the population of the area voted 70:30 in favour of fluoridation and the water has been fluoridated at a rate of 0.8ppm ever since. Joe has been a lifelong advocate of water fluoridation as a result. He is familiar with the peer-reviewed science, but the most gratifying part for him is his own anecdotal observation in his practice. "Thirty years ago we were seeing high levels of decay and caries in almost all adolescents in Biddeford. Nowadays it is unusual if our children need restorations of any type. A lot of our children are making it into adulthood without ever having a restoration. That's a big change just in my lifetime and I believe that fluoride has had a significant positive impact on the oral health of our population."

Leadership

The role that Joe played in promoting the fluoridation of water in his area identified him as a dentist with leadership skills. He went on to become President of the Maine Dental Association, and later, Vice President nationally of the American Dental Association. In was in this capacity with the ADA that visited Ireland for the first time in 1997 to attend the official opening of the new facilities at the Dublin Dental University Hospital. Around that time also, a former Professor of his from Tuft's University, Vangel Zissi, invited him to become a Fellow of the International College of Dentists. He went on to become Deputy Regent of the ICD for Maine where he regularly brought in new members to the College. This resulted in him becoming the Distinguished Deputy Regent in the USA in 2002. In 2005, his old mentor Vangel came back to him saying that he wanted to inject some new blood onto the International Council (the ruling body) of the ICD and asking Joe to step forward. Joe did this and became even more active in the College, culminating in his unopposed election as International President of the College for 2015.

And so, life comes full circle. The International President of the International College of Dentists attends his conference in Dublin and has a sense of coming home. We have every reason to be very proud of our diaspora – and to welcome them home.

'How to volunteer' workshop

The ICD 2015 Conference in Dublin will include a public workshop on dental professionals volunteering their services. The three-hour course is open to both conference and non-conference delegates and is designed for dentists, dental hygienists, other dental professionals, and other interested parties who want to learn more about volunteering. Topics include the nature of volunteer activities, cross-cultural issues, comparison of service and teaching projects, how to get started either at home or abroad, and where to find these volunteer opportunities. There will be ample time for interaction with the presenters and experienced members of the audience. It will also be useful for those with some volunteering experience looking for new ideas or just validation of what they are doing.

The course will take place in the DDUH from 9.00am to 12 noon on Saturday, October 10. It is open for attendance, free of charge, but those intending to attend need to register in advance. See www.icd2015.ie.

Prestigious College

The International College of Dentists (ICD) is the world's oldest and largest honorary society for dentists. Conceived in 1920, the College currently has over 12,000 members, in 122 countries, who have been awarded the title of Fellow in the ICD.

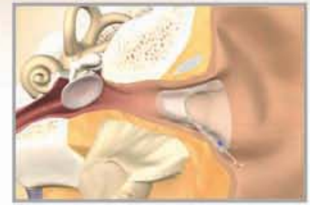
Fellowship in the College is extended by invitation only. A nominated dentist must pass a rigorous, peer review process leading to the recognition of the individual's "outstanding professional achievement, meritorious service and dedication to the continued progress of dentistry for the benefit of humankind." All members of the College, regardless of their native language or country of residence, adhere to one universal motto, 'Recognising service and the opportunity to serve'.

The International Council is ICD's ruling body for the worldwide membership and Sections. The 40 members of the Council include the International Officers and Councillors who represent ICD's Sections and Regions. The International Council meets annually to set policy directives for the College worldwide. The members of the Council direct the growth and the spread of influence of the ICD globally. The Secretary General and staff of the Council Office are responsible for implementing the directives and policies of the Council. There are 15 Sections of the ICD, which are organised regionally. Europe is Section V and the current President of the European Section is Dr Tom Feeney.

Dr Joe Kenneally, ICD International President, with Dr Tom Feeney, President of the European Section.

A Breakthrough in TMJD Treatment

Now you can offer your patients the latest technology in Temporomandibular Joint Disorder treatment. The Cerezen™ device is a safe and effective aid in reducing TMJD pain and associated symptoms such as grinding of teeth and headaches.

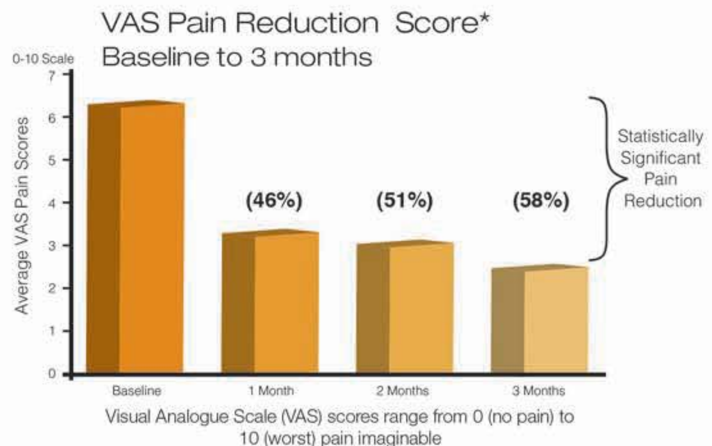


A New Approach

The Cerezen™ devices are custom ear canal inserts that support the temporomandibular joint and reduce pain. They also provide a "cognitive awareness" to the patient that discourages grinding, clenching and other para-functional behaviour.

Patient Outcomes

In a clinical trial, subjects experienced statistically significant pain reduction while using Cerezen™ devices. Visual Analogue Scale scores showed a 58 percent pain reduction after three months of use. At the end of the trial, 100 percent of subjects reported good to excellent results.*



Benefits of the Cerezen™ Device

	Cerezen™ Device
• Designed to be worn comfortably 24/7	✔
• No interference with eating or talking	✔
• Barely visible	✔
• No night-time discomfort	✔
• No negative effect on the bite	✔

info@Cerezen.eu • www.cerezen.eu
Freephone: +800 19431965

*Tavera A, et al: Approaching Temporomandibular Disorders From a New Direction. A Randomized Controlled Clinical Trial of the TMDes Ear System. J Craniomandibular Practice July 2012; Vol 30, No 3, 172-181.

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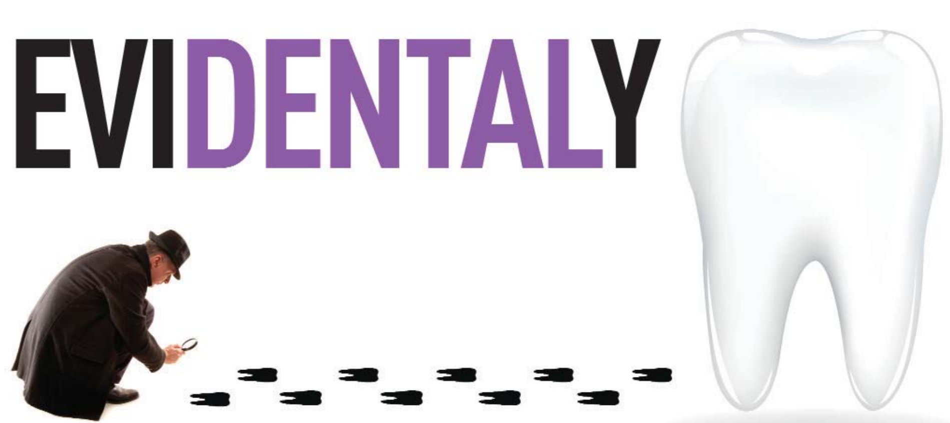
Follow the clues…

The Rochestown Park Hotel in Cork plays host to this year's IDA Annual Conference, and incoming Association President Anne Twomey will join the hardworking Conference Committee in welcoming delegates to another excellent event.



From Thursday April 16 to Saturday April 18 a fantastic programme of hands-on courses, lectures, workshops and, of course, social events will keep everyone educated and entertained.

Once again, parallel sessions on Friday and Saturday will offer a wide choice of topics to attendees, while sessions for our technician, nurse and hygienist colleagues ensure that the entire dental team is catered for. The business of the Conference will be dealt with at the IDA and IDU AGM, which takes place on Thursday evening at 6.00pm. A CPR/medical emergency workshop will allow you to address a core CPD requirement, or you can support the dentists of the future by paying a visit to the poster presentations for the Tony Costello Memorial Award. As always, our social programme is a vital addition to the conference, with golf, a fun run, and the Annual Dinner to look forward to,

Don't miss…

PRE-CONFERENCE PROGRAMME **THURSDAY APRIL 16**

Professor Ken Kurtz

Dr PJ Byrne

Dr Declan Corcoran

Dr Tim Donley

Dr David Clarke

Professor Terry Donovan

Professor Ken Kurtz

Reviewing contemporary prosthodontic practice: removable partial overdentures – an underutilised modality?

This course will discuss how one or two implants attached to a removable partial denture can create a stable and claspless aesthetic replacement for multiple missing teeth.

Drs PJ Byrne and Declan Corcoran

Crown lengthening – techniques for improving success in restorative and cosmetic dentistry

A review of the indications for and applications of clinical crown lengthening as an integral part of comprehensive diagnosis and treatment planning for your patients.

Dr Tim Donley

Periodontics hands-on workshop for dentists: translating technology into practice

How to formulate a clear approach as to what to use and how to use it. Attendees will leave with a clear vision of what to look for, what to say and what to do every time they sit down and pick up a probe.

Dr David Clarke

Better, faster, prettier anterior composites

Experience a unique approach to modern resin dentistry.

Participants will learn and perform the five new steps to achieve rock solid posterior composite contacts.

Professor Terry Donovan

Practical pearls for clinical use: a day with Terry Donovan

This presentation will discuss several controversial topics related to restorative dentistry and attempt to provide guidance based on the best available evidence.

while the trade show will allow you to support our colleagues in the dental trade, without whom events like this could not take place.

Pre-Conference Programme

Our Pre-Conference Programme on Thursday features an impressive range of hands-on courses, led by eminent experts from home and abroad. Professor Ken Kurtz extols the virtues of removable partial dentures in two half-day courses, while Drs PJ Byrne and Declan Corcoran will spend Thursday afternoon telling us all we need to know about crown lengthening. Dr Tim Donley shares his expertise in periodontics in two half-day courses – one for dentists and one for hygienists – while Dr David Clarke presents a full-day course on anterior and posterior composites. Finally, Professor Terry Donovan will give a fascinating full-day course looking at a number of controversial topics in restorative dentistry, teasing out the pros and cons and attempting to offer guidance to dental professionals.

Lecture programme

Once again, Friday is dental team day, with parallel lectures taking place on a wide range of topics. Clinical topics include presentations on successful strategies for tooth whitening from Lina Greenwall, diagnosis and management of dental erosion from Terry Donovan, and caring for patients with cancer from

Don't miss…

DENTAL NURSES SATURDAY, APRIL 18

LAURA HORTON and
MICHAEL BENTLEY

JACK OF ALL TRADES
– the role of the dental nurse

Laura and Michael will share their knowledge and help the delegates to become effective at performing two roles or more in the practice. Many team members have multi-roles such as dental nurse and manager. This can lead to a feeling of being overwhelmed as the team member tries to 'juggle' several balls at once. Laura and Michael have been in this position and will share with you their tips to encourage a proactive work environment for the mutli-role team member.

DENTAL CARE IRELAND

Your Local Practice

Join Ireland's Newest Dental Practice Network

Established in October 2014, Dental Care Ireland is a new and exciting network of dental practices in Ireland. We are actively investing in and partnering with well-established dental practices to create a network of modern and professional dental practices across the country.

With increased competition and compliance requirements, we understand the pressure that dentists in Ireland are under to service their patients to a high standard while at the same time operating profitable practices. By joining Dental Care Ireland, we can ensure that dentists can focus on treating patients while we will carry the financial and administrative burden. At the same time we will ensure that each of our practices will deliver the highest standards of care at all times.

Our team has an expertise in dentistry and a proven track record in building successful healthcare organisations in Ireland. Prior to the establishment of Dental Care Ireland, its Chief Executive, Colm Davitt led the growth and development of Euromedic in Ireland.

Dentist and Dental Care Ireland's Group Clinical Advisor, Dr Kieran Davitt, BDentSc, has been practising as a dentist in County Galway for over 15 years and will oversee the highest level of clinical standards in Dental Care Ireland.

Our team also includes experienced professionals in clinical operations, healthcare marketing, human resources and finance.

We passionately believe in building an organisation that values each individual and provides the support and encouragement to help people and practices reach their full potential.

If you are interested in learning more about Dental Care Ireland or if you would like to become part of the Dental Care Ireland team, please contact us.

DENTAL CARE IRELAND

Your Local Practice

Colm Davitt, Chief Executive
M: 087 914 9814 | **T:** 01 853 7810
E: colm.davitt@dentalcareireland.ie

Kieran Davitt, Group Clinical Advisor
E: kieran.davitt@dentalcareireland.ie

www.dentalcareireland.ie

Don't miss…

DENTAL TEAM DAY FRIDAY, APRIL 17

JIDA SPEAKER

TIM NEWTON
Professor of Psychology as Applied to Dentistry, King's College London

Psychological approaches to dental anxiety: a proportionate approach

Eleanor O'Sullivan. Alternatively, you can hear Michelle Murphy on dermatology for dentists, Jennifer Pinder on treating phobic patients, and Eanna Falvey on head and facial trauma in sport. In the afternoon, both groups will come together for the final two presentations. Tim Newton will present the *Journal of the Irish Dental Association* lecture 'Psychological approaches to dental anxiety: a proportionate approach', and Ben Goldacre will bring the session to a close with an entertaining and insightful presentation on 'Bad Science'.

Saturday's session sees the various professional groups catered to by tailored sessions. For dentists, another parallel session offers some excellent options for the day. Tara Renton covers the painless management of the oral surgical patient, Hal Duncan asks why we are failing in endodontic outcomes, and Ken Kurtz gives an update on post and core. In the alternative session, Stephe Fayle looks at dental caries in young children, Sean McCarthy looks at veneers, and Andrew Bolas tells us how to get the best diagnosis from our radiographs. Meanwhile, sessions for dental nurses, technicians and hygienists will look at communication, oral surgery, anterior aesthetic treatment, peri-implantitis, and ultrasonic debridement.

Clinical workshop

Once again, registered delegates can cover one of the mandatory requirements for continuing professional development (CPD) by taking this workshop on CPR/medical emergencies on Saturday, April 18. All members of the dental team are welcome; booking takes place on the day subject to availability.

Social programme

This year sees the return of a range of popular events, with indoor and outdoor activities to suit all tastes.

The President's Golf Competition will take place from 2.30pm at Cork Golf Club, Little Island, on Thursday April 16. Conference delegates, accompanying persons and trade exhibitors are all welcome to play. Anyone who is registered

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Suitable for all posterior restorations

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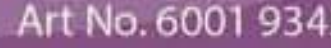
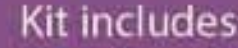

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Evidence-based dentistry
Rochestown Park Hotel, Cork, April 16-18, 2015

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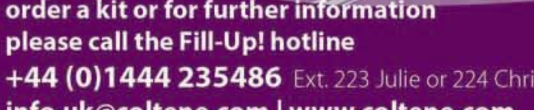

To book a demonstration, order a kit or for further information please call the Fill-Up! hotline
+44 (0)1444 235486 Ext. 223 Julie or 224 Chris
info.uk@coltene.com | www.coltene.com

Don't miss...

DENTIST'S DAY SATURDAY, APRIL 18

PROFESSOR KEN KURTZ
Professor and Associate Director of the Advanced Education Programme in Prosthodontics, NYUCD

Post and core: update 2015
A review of prefabricated alternatives versus custom cast, and indications for this treatment modality.

Anne Twomey
President Elect

for a pre-conference course on Thursday can play on Wednesday, April 15, in the afternoon instead, if they wish.

Please join our trade colleagues on Thursday evening, directly after the AGM, for the official opening of our "Evidentaly" trade show by the newly inaugurated IDA President Dr Anne Twomey. Fun, music and drinks will be provided for all.

Following this, everyone is invited to a buffet supper in the Rochestown Park Hotel from 9.00pm. Tickets are priced at €25 and are available from IDA House.

Our Annual Dinner takes place on Friday evening and will, as ever, be the highlight of the conference. A drinks reception at 7.30pm will be followed by dinner and dancing. Dress code is black tie, and this year's guest of

honour will be Donal Óg Cusack, former Cork hurler, GAA pundit, and Chairman of the GPA (pictured above).

If you feel like a challenge after the late night on Friday, we are once again holding our 5K fun run on Saturday morning. Run, jog or walk around the Douglas area of Cork City, with all proceeds going to Irish Guide Dogs for the Blind.

Awards

We have made some changes to one of our awards this year.

Dr Joe Moloney Award

2015 sees a complete revamp of the Dr Joe Moloney Award, which will be awarded to an outstanding Irish presenter/lecturer at our conference, chosen by delegates. The Award, kindly sponsored by the Dental Health Foundation, will be chosen on the final day of the conference when all delegates will have the chance to nominate their presenter of choice.

Tony Costello Memorial Medal

The competition for the Tony Costello Memorial Medal is judged on a table demonstration or poster presentation of not more than 10 minutes on a subject applicable to general dental practice.

Conference Committee

Donal Blackwell
Chairman

Judith Phelan

Pat O'Driscoll

Kieran O'Connor

Elaine Hughes

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Raffle

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IDA Dental Show

Come visit us at the IDA Dental Show in Cork
Stand 8-9

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Pioneering innovations from Voco

Voco will present several innovations at the IDA Annual Conference 2015. According to the company, Admira Fusion is the world's first restorative material to combine Ormocer with nanohybrid technology. In this case, both the fillers and the matrix are based on silicon oxide. Thanks to this pure silicate technology, Admira Fusion boasts excellent biocompatibility, extremely low shrinkage, optimal colour stability and a high filler content. The new filling system is complemented by Admira Fusion x-tra, which allows increments of up to 4mm while displaying the same physical properties. Further new products include the fast-setting glass ionomer material IonoStar Plus and Clip Flow, a flowable restorative material for temporary restorations. Developed especially for the prophylaxis sector, Voco is introducing the protective dental cream Remin Pro forte, adding ginger to the range of flavours available in the Remin Pro product range. And last but not least, there is Celalux 3, a new cordless high-performance LED light-curing device in a pen design. It weighs only 70 grams and it can be handled like normal instruments in the surgery. In addition to these innovations and the well-known "Made in Germany" bestsellers, Voco will also exhibit a host of offers at bargain prices in its highlights. Visit VOCO at the IDA Annual Conference: stand 9.

New treatment for TMJDs

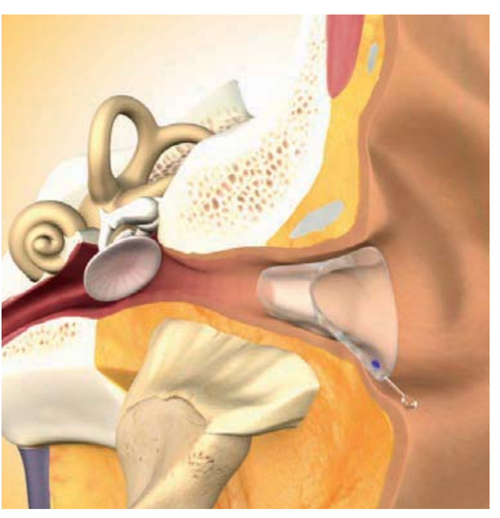
A new way to treat temporo-mandibular joint disorders (TMJDs) has been approved for use in the UK and Ireland. The Cerezen device comprises a pair of removable custom-made hollow inserts, which are placed within the ear canal to reduce the symptoms, pain and related conditions including grinding of teeth and headaches. A clinical study reports that 100% of patients are satisfied with these unique new ear canal inserts, which reduce TMJ pain.

Simply inserted in the ear, the nearest access point to the TMJ, the device works by exerting subtle pressure on the walls of the ear canal when the jaw is in the closed position. This encourages the patient to return to the 'open bite' position, minimising the tendency to clench the jaw and tense the surrounding muscles.

The Cerezen device was developed in the USA, has achieved USA FDA clearance and complies with the essential requirements of the relevant European Directives MDD93/42 (CE Mark). In addition, an A Level 1 Clinical Study showed that 100% of users indicated excellent (71%) or good (29%) overall satisfaction with the Cerezen device. One reason for the effectiveness of the devices is that they can be worn 24 hours a day and are practically invisible, ensuring total discretion – another reason why compliance levels among users is also markedly higher than with intrusive bite splints.

The device is quick and simple to fit, requiring only around 15 minutes' chair time plus 25 minutes for the ear impression by a trained professional such as an audiologist. Once the diagnosis is made and ear impressions taken and submitted, TMJ Health LLC produces the custom devices and supplies them in approximately two weeks.

The new Cerezen ear implants and, below, how they fit in the ear canal.



According to the company, they are easy and convenient for the patient to insert and remove, offering a simple and safe reduction of TMJD symptoms without impacting the patient's lifestyle - as speech, eating and drinking are unaffected. As the device is hollow, it does not affect hearing, and is fitted with small retraction posts to make it easy to remove – which is advised for bathing and swimming.

Dr Roger Wixtrom, who has 25 years of experience in the evaluation of the clinical performance and safety of a range of medical devices, was the Scientific Director of the pivotal clinical study of the Cerezen device. This compared its performance and safety to that of the most widely used current treatment, the bite splint and he commented: "While bite splints have helped to reduce pain associated with TMJD, there are drawbacks with these devices. For example, they cannot be worn while eating and they can also affect speech, and as such are typically only worn at night while sleeping. The Cerezen device offers a safe and effective option that patients should discuss with their dentist or ENT specialist"

Following regulatory approval, the Cerezen device can be seen at The Dentistry Show, Dentistry 15, the Irish Dental Association Show and Identex, where there will also be presentations for delegates about this innovative new device.

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* versus a regular fluoride toothpaste with 1450 ppm fluoride.

References

1. Cantore R et al. J Clin Dent. 2013;24 (Spec Iss A): A32-A44. 2. Wolff M et al. J Clin Dent. 2013; 24 (Spec Iss A):A45-A54. 3. Santarpia P, Lavender S, Gittins E et al. Submitted for publication in Am J Dent. 2013. 4. Kraivaphan P et al. Caries Res 2013;47:582-590. 5. Hu DY et al. Data on file. Colgate-Palmolive Company, 2013.

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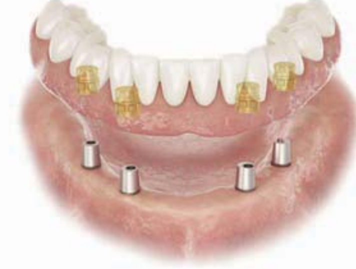
Dentsply Implants on display

At the major IDS show in Cologne recently, Dentsply Implants showed the following: their prosthetic solution with the comfort of a fixed restoration; a patient-specific suprastructure on transgingival implants that eliminates the need for additional abutments; and, an implant for sloped ridge situations for excellent aesthetic results.
These are the respective benefits of Atlantis Conus concept, Atlantis ISUS implant suprastructures on XiVE TG implants, and the OsseoSpeed Profile EV implant.



The Atlantis ISUS implant superstructure.

Conus concept

According to Dentsply Implants, the Atlantis Conus concept, for all major implant systems, is a new prosthetic solution that provides removable prosthesis with the comfort of a fixed restoration; the patient-specific ATLANTIS Conus Abutment together with prefabricated SynCone caps provide patients with a unique, cost-effective, friction-retained and non-resilient prosthetic solution. This solution offers renewed patient comfort and confidence, and helps to eliminate problems often associated with dentures, such as pain.

Patient-specific suprastructures

The company says that Atlantis ISUS implant suprastructures on XiVE TG implants provide the advantages of a patient-specific custom restoration and the cost-effectiveness of a transgingival implant design, eliminating the need for additional abutments. With the XiVE TG implant, high primary stability is achieved in all types of bone.

OsseoSpeed Profile EV implant

The OsseoSpeed Profile EV implant is the second generation of the uniquely shaped, patented implant specifically designed for sloped ridge situations that allow dentists to achieve 360° bone preservation, a prerequisite for excellent aesthetic result. This innovative implant was first introduced in 2011 and is now upgraded with the simplicity and design principles of Astra Tech Implant System EV.

Treatment solutions and product highlights

The advantages of an extensive and comprehensive product portfolio include the possibility of treatment solutions for all indications. At IDS, Dentsply Implants' treatments solutions and product highlights included:

- Simplant computer-guided implant treatment with the Astra Tech Implant System EV;
- the release of Simplant 17 software, where the calculator shows important planned implant relations, such as the distances between implants, implant vertical heights and implant inclination compared to the desired insertion;
- the Symbios regenerative solutions portfolio, including bone graft material, membranes and instruments, with a presentation of Symbios Collagen Membrane SR (slow resorbable) and Symbios Biphasic Bone Graft Material;
- the introduction of the Atlantis Abutment Insertion Guide, making it easier and safer to install a patient-specific, cement-retained Atlantis abutment;
- intraoral scanning for Atlantis Abutment with iTero; and,
- new interfaces for Atlantis abutments, including ANKYLOS C/X C/ non-indexed and NobelReplace Conical Connection.

QUIZ questions

Submitted by Dr Seamus Sharkey.

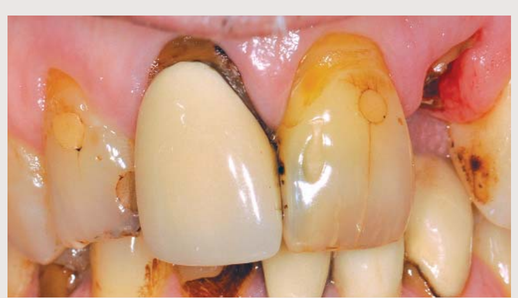


FIGURE 1: Old metal ceramic crown on UR1.

FIGURE 2: Veneer preparation on UR3 and UR2,4 – Emax crowns.

Permanent cementation and bonding of indirect restorations:

1. List four main functions of modern cements.
2. When selecting a dental cement, a number of considerations need to be taken into account such as:
   - the resoration itself;
   - the cement; and,
   - the clinical scenario.

   List two factors for each of the above categories that need to be considered.
3. Two main categories exist for modern cements – water-based and polymerising. Give two examples of each.
4. Although a myriad of factors can affect the choice of dental cement, what type of cements are, in general, suitable for the following restorations:
   A metal ceramic or full coverage metal restorations (**Figure 1**);
   B partial coverage restorations – onlays, inlays;
   C ceramic veneers (**Figure 2**);
   D all-ceramic crowns (**Figure 2**); and,
   E resin-bonded/Maryland bridges.

Answers on page 99.

BF MULHOLLAND LIMITED

Meet Your Reps

GRAINNE

Hello, my name is Grainne and I have worked with BF Mulholland as a field sales rep for over two and a half years. Working for one of Ireland's leading dental suppliers and the only local Northern Ireland supplier allows me to ensure that our dentists have access to the full range of products offered by all the leading dental manufacturers. We are a one stop shop for dental practices and we are constantly expanding our range. I love being out on the road and meeting customers and advising them about products that best suit their needs

When I'm not working I enjoy spending time with my husband Colin and, being quite a social person, I love catching up with friends. To de-stress I also enjoy going to the gym and circuit's classes and love my holidays and weekends away!

Tel: +44 (0) 7739 095508
Email: grainne@bfmulholland.com

MIKE

For anyone who may not know or have not met me yet my name is Mike Connolly and I am the sales representative covering Dublin and the surrounding counties. I have been with BF Mulholland for the last year and I have been active in the dental industry for the last 12 years. I find the dental field a constantly changing and challenging industry and love to be a part of it.

I am married to Audrey and have two lovely children Alex aged 10 and Ellie aged 6 and they keep us both busy and keep me young at heart but leave little spare time at the weekends. However in my spare time I am a movie buff and enjoy hill walking and outdoors activities with the children.

Tel: 086 1805904
Email: mike@bfmulholland.com

NOEL

My name is Noel Lucy and I am a field sales representative for BF Mulholland. Having worked as a Pharmaceutical Medical representative for 18 years, I transferred into the dental industry in 2007. I have really enjoyed the new challenges. It has been great to work with BF Mulholland as there is a very nice family atmosphere within the company. Our competitiveness and next day delivery has given me a good advantage.

I live in Cork city with my wife Rosemary and our four year old Springer spaniel dog "Millie." We both love sport and play tennis regularly. Munster rugby is one of my great loves and I travel regularly to matches home or away. I have refereed Rugby for over 25 years and latterly have been involved in Schools and juvenile refereeing, which gives me great satisfaction as many of these players have gone on to gain representative honours. I am also an avid Skier and like foreign travel.

Tel: 087 2424974
Email: noel@bfmulholland.com

www.bfmulholland.ie

Dental transitions

Dr Garry Heavey, who practises at Sandycove Dental Care in Dublin, addressed the Association's recent Business of Dentistry Seminar in Croke Park on the topic of how dentistry is changing.

Showing a photograph of his graduating class from TCD in 1980, Garry highlighted how dentistry has already gone through a significant transition. In that year, there were only six female graduates, whereas for some time, females have outnumbered males entering dentistry. He also pointed out that the options open to graduates for their careers are now also greater. He said: "Remaining an associate or entering a career in corporate dentistry are options being taken by many young dentists. Remaining an associate often appeals to younger colleagues because it allows them to organise family time or to work on a part-time basis without the burden of running a business." In the past, he said, the model was that of a single-handed principal; now we have practices with associates, and expense-sharing partnerships.

Another significant change has been the development of a career pathway for general practitioners. "Very few of the class of 1980 that remained in general practice did further degrees. Now we have a pathway through general dental practice defined by exams which are fit for purpose rather than just academic, i.e., the MFD leading to the MGDS and eventually to Fellowship."

Get off the treadmill

General practice can be very challenging. Like many other dentists, Garry says he found himself on a treadmill without focus about 20 years ago. Having been inspired by a number of speeches he heard at conferences over the years, Garry decided to set goals for himself. (He was especially inspired by Dr Ken James, dentist and Olympic basketball player, and by Paddi Lund, the Australian dentist who writes on business.)

He decided on the following: "I want to practise a profession I enjoy, with people I enjoy working with, in an environment I enjoy working in, for patients I enjoy working for, and I want to make a contribution to my profession."

One of the important outcomes of this process was that he decided to no longer do molar root treatments as he found it stressful and realised that his patients would get better outcomes if he referred them to a specialist.

Following on this theme, he suggested that anyone who is an associate should define their goals and ask themselves: "Do you really want to run a business?" He also gave examples of the challenges of the business of dentistry – compliance; administration; team building; and, finance and maintaining cash flow.

Paul O'Grady
Journalist and managing editor at Think Media
paul@thinkmedia.ie

Building success

According to Garry, the characteristics of a successful dental practice are:

- a happy, motivated, effective, efficient and consistent team;
- delivering a high quality patient journey;
- with the principal or partnership managing the business; and,
- anticipating and embracing change.

These are the key elements of a successful dental practice. An essential element is team building in the practice which, he says, requires careful selection, effective training and regular evaluation. "While the team is the engine of the business, courtesy and respect within the team is the oil. The team at Sandycove Dental Care took on Paddi Lund's courtesy system 15 years ago and we have developed it for ourselves since then. Our goal is to work in creative harmony."

The TCD class of 1980:

1. Robert Frost, 2. Clem Sullivan, 3. Brian Slein, 4. Bob McNulty, 5. Gerry Gaffney, 6. Tom O'Sullivan, 7. Chris Lynn, 8. Gerry Kearns, 9. Liam Costello, 10. James Hoey, 11. Darragh Coakley, 12. Dermot Canavan, 13. John Fahey, 14. John Tiernan, 15. Paddy Cullen, 16. Michael Lynch, 17. Irene Kennedy, 18. David Rutledge, 19. Michael Fleming, 20. Sean Malone, 21. Garry Heavey, 22. Barry Grundy, 23. Frank X. O'Brien, 24. Bill Anderson, 25. John D. Regan, 26. Niall McGuinness, 27. Mary Queenan, 28. Breifne Cully, 29. Joe Bergin, 30. Jane Renehan, 31. Michael Fenlon, 32. Moya McAlinden, 33. Simone Elyan, 34. Paddy O'Sullivan, 35. Grainne Cahill, 36. Eddie Owens.

Advice

Garry gave two fundamental pieces of advice for young dentists. Firstly, he described what he calls the golden rule of separating business finance from personal finance. "Pay yourself a wage from the business and put it into a personal account. Do not use a business account for personal items."

The second piece of advice he gave is to choose professional advisers very carefully – particularly accountants and solicitors. "A good question to ask potential advisers is how many dentists are on their books and remember that expense-sharing relationships are almost unique to dentistry."

Feedback

Surveys carried out by Sandycove Dental Care have confirmed that the three most important parts of the dental experience for patients were:

- how well dentists explained the procedures they had to carry out;
- the quality of the friendliness and courtesy the patient experienced; and,
- the physical gentleness with which they were treated by the dentist.

The future

Change has accelerated in pace in recent years, with digital imagery, cross-infection control and computerisation all featuring in changes that challenge dentists. So if change is galloping ahead, what can we look forward to? He posed several questions about the future:

- how soon will impressions be a thing of the past?
- what percentage of orthodontic work will be carried out by GDPs?;
- will most endodontic work be carried out by specialists?;
- will every practice have their own cross-infection control technician?;
- is there a future for single-handed practitioners?;
- will corporates dominate Irish dentistry?; and ,
- what will happen to indemnity insurance?

Whatever the future brings, Garry's message was to set personal and professional goals and to make changes that facilitate the achievement of those goals.

Hospitals Cup winning team 1980 *SEATED: Gerry Cleary; and, Diarmuid McHugh. FRONT ROW: Garry Heavey; Barry Devaney; Niall McDonagh; Darragh Coakley; Paddy O'Sullivan; Gerry Kearns; and, Owen Dee. BACK ROW: Gerry Glackin; Bill Cleary; Niall O'Connor; Sean Tunney; Dave Gleeson; Michael Fenlon; Conor McAlister; and, Michael Fleming.*

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[1] Council Directive 2013/32/EU of May 2013
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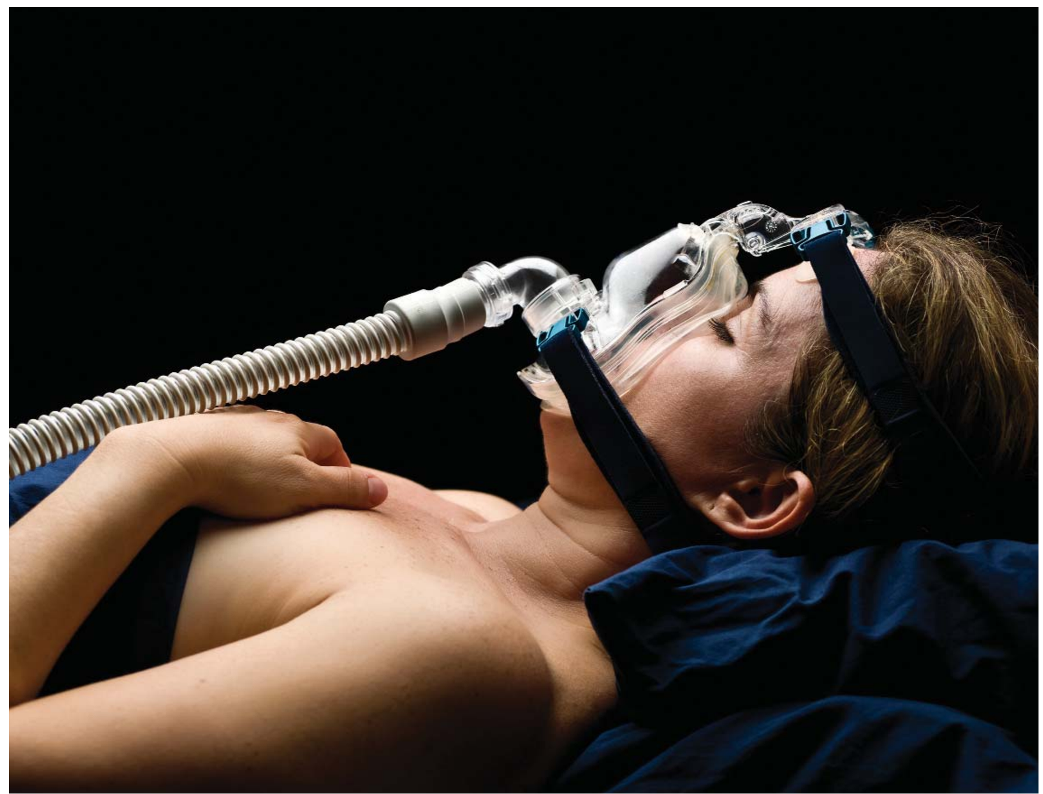
Sleep apnoea for the dental practitioner

Sleep apnoea affects up to 5% of adults, and there is a role for appropriately trained dentists to play in its diagnosis and treatment.



Background and aetiology

Obstructive sleep apnoea (OSA) is characterised by repetitive, intermittent partial and/or complete obstruction of the upper airway during sleep. The aetiology of the condition is often related to the anatomy of the upper airway, whereby it is narrower than normal for some reason. For example, a large tongue and long, narrow soft palate make the airway naturally narrower, and fat deposits in the neck compress the airway from the outside (**Table 1**). Obstruction causes intermittent hypoxia, hypercapnia and disrupted sleep. The 'fight or flight' response is also triggered, with surges in catecholamines leading to sweating, tachycardia, elevated blood pressure and hyperglycaemia (**Table 2**).

OSA affects about 1-2% of children and approximately 5% of adults. Incidence rises with advancing age and increasing body mass index (BMI). With an ageing population and rising obesity levels, it is therefore likely to become more common.

Driving issues

Patients with OSA are at significantly increased risk of motor vehicle accidents. New Road Safety Authority guidelines require that patients who have been diagnosed with OSA must notify their driving licence issuing body. Subsequently, their GP will be asked to complete the D501 form, certifying their medical fitness to drive. The Road Safety Authority is in the process of updating the guidelines for commercial drivers (see http://www.rsa.ie/RSA/Licensed-Drivers/Safe-driving/Medical-Issues/).

Issues for dentists

Maxillary splints aggravate OSA: Research has shown that the severity of OSA increases in 60% of patients who are provided with a maxillary occlusal splint. Before making a maxillary splint it is therefore advisable to ask patients whether or not they snore and suffer from excessive tiredness/sleepiness. If they do have these symptoms, they may have OSA and should be referred to

Dr Padraig McAuliffe
BDS (NUI) MFDS (RCSEng) DChDent (Prosthodontics)

Practice limited to prosthodontics and implant dentistry, Riverpoint Specialist Dental Clinic, Limerick, and No. 16, Booterstown, Co. Dublin.

Dr Elaine Purcell
MB BCh BAO LRSI MRCPI

Consultant in Sleep Disorders Medicine
Mater Private Hospital, Eccles St, Dublin 7

Table 1: Clinical presentation of obstructive sleep apnoea.

CLINICAL SYMPTOMS
Snoring (most common symptom)
Excessive tiredness/sleepiness
Witnessed pauses in breathing during sleep (apnoeas)
Fitful/restless sleep/awakenings
Frequent nocturnal urination/bedwetting in children
Night sweats
Morning headaches
Reduced memory, concentration span
Hyperactivity (attention deficit) in children
PHYSICAL SIGNS
Commonly overweight/obese
Large tongue
Enlarged tonsils (children)
High arched palate
Narrow airway – Mallampati Class III-IV
Increased neck circumference (collar size >16″ in men, >15″ in women)
Obvious craniofacial abnormalities (e.g., Down syndrome)

a sleep physician, particularly if they drive a lot or have cardiovascular conditions. A mandibular splint can be safely made in the mean time.

Bruxism management: Oral appliances for apnoea are the most effective type of appliance for reducing bruxism activity. This does not mean that they should be routinely prescribed for patients with bruxism, as they can have some long-term side effects on the occlusion and on temporomandibular joint health. However, for apnoeic patients who also brux, they are an excellent option.

TMD and facial pain: There is a complex interaction between sleep and pain. Basically, pain conditions such as TMD are aggravated by disturbed sleep. All patients suffering from persistent facial pain should be asked about their sleeping habits.

Increased risks in sedation: Patients with OSA are at increased risk of respiratory complications, including respiratory arrest after receiving sedation/general anaesthetic. Patients should have their continuous positive airway pressure (CPAP) machine ready for use following any procedure (surgical or dental) where sedation/anaesthetic is required and extended monitoring is necessary. Such procedures should only take place after consultation with the patient's general medical practitioner or sleep physician.

The role of the dentist in sleep apnoea management

Diagnosis

The most common complaints of OSA patients are that they snore, are always tired or have very disturbed sleep. They may present to dental practices

Table 2: Possible consequences of OSA

Possible consequences in adults	Possible consequences in children
High blood pressure	Stunted growth
Type II diabetes	Reduced academic performance
Obesity	Obesity
Cardiovascular disease	Mood impairment
Cerebrovascular disease	Premature cardiovascular disease/hypertension
Depression	Pulmonary hypertension
Increased risk of motor accidents	

requesting anti-snoring devices, which are the oral appliances described below. While some of these patients may just be snorers without having apnoea, others may have moderate or severe OSA and there is no way of knowing for sure just by talking to them. While dentists may be in a position to recognise patients with the signs and symptoms of OSA, they are not licensed or indemnified to make a formal diagnosis. It can be very difficult to know from a simple clinical history how severe OSA really is. With the considerable health risks involved, a proper assessment must be carried out by a medical consultant with appropriate training in sleep medicine prior to any intervention. A list of sleep clinics and sleep physicians in Ireland can be found on the Irish Sleep Apnoea Trust Website – www.isat.ie.

The medical consultant will make a diagnosis on the basis of the clinical picture and an overnight physiological recording of the patient's sleep and breathing, called a sleep study or polysomnogram. Sleep studies are normally carried out in a hospital under controlled circumstances to get the best quality information possible, but are occasionally done using simpler equipment in the patient's home. The sleep physician is the only person who can decide this. Dentists should not buy a portable sleep study machine and try to diagnose apnoea themselves, as they do not have the medical training required to support that diagnosis, particularly if something goes wrong.

At diagnosis, OSA is categorised as mild, moderate or severe, based on the combined number of apnoeic (complete obstruction) and hypopnoeic (partial obstruction) events per hour. Mild OSA is defined as 5-15 events per hour, moderate is 16-30 events and severe is >30.

Treatment – medical

CPAP: The gold standard medical treatment for OSA is with CPAP. This involves the patient wearing an oral or nasal mask, which is attached to a machine that blows pressurised air into the airway to keep it patent during sleep. It is the most effective treatment approach but compliance is estimated to be only approximately 50% after one year.

Surgery: Surgical intervention to treat OSA is now generally avoided, due to the favourable profile of the treatment alternatives. Common surgeries in the past included UPPP (uvulo-palato-pharyngoplasty) performed by ENT surgeons. Newer surgical treatment options that are more radical but have higher success rates include MMA – maxillo-mandibular advancement surgery.

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Dental indemnity and oral appliance treatment

It is important to clarify with your professional indemnity company in advance of getting involved in this type of treatment, whether or not you are covered to do so. Dental Protection and the DDU have position statements on their websites that clarify the requirements for indemnity. In many cases, a properly documented training course is required. The usage of oral appliances can have side effects for patients, particularly if treatment isn't carefully carried out. A high proportion of oral appliance patients can develop permanent bite changes or TMJ problems, particularly in cases where a greater degree of advancement is required to achieve a successful clinical outcome. Ultimately, the final decision on treatment success or failure can only be determined by a sleep physician, and dentists should never attempt to sign off on a patient as being cured or treated on the basis of their own opinion. If a patient has a serious health complication or a car accident related to incompletely treated apnoea and the dentist has taken full responsibility for the diagnosis, treatment and discharge of the patient, they may not be covered by their indemnity company.

This procedure's availability is limited.

Treatment – dental

Oral appliances: A proportion of patients are either unsuitable for CPAP or refuse to use it. Some of these may respond better to the use of oral appliances made by a dentist. Normally, these patients have mild or moderate apnoea, but occasionally oral appliances can be used in severe apnoea where CPAP has failed. They are also an excellent treatment for snoring. Patients with a low BMI and a tendency towards more severe apnoea when lying on their backs than their sides are more likely to respond well to oral appliance treatment.

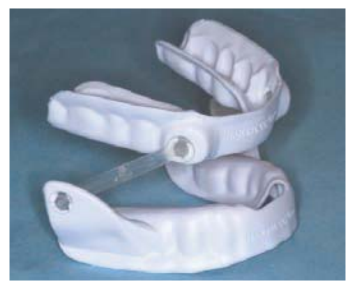

FIGURE 1:

The Narval CC is a new generation of mandibular repositioning device (MRD) designed specifically for the treatment of adult obstructive sleep apnoea.

SomnoDent is a custom-made medical oral appliance for the treatment of mild to moderate obstructive sleep apnoea.

Practicalities of oral appliance therapy

Oral appliances for OSA are essentially like a maxillary and mandibular occlusal splint, related or connected to one another in a way that maintains the mandible in a protruded position. As the tongue is connected to the mandible, protruding the mandible pulls the tongue forward and makes it less likely that it will block the airway. There are lots of different types of oral appliances. They vary in their robustness and size but all should have some mechanism that allows the degree of mandibular advancement to be modified. Some common oral appliances are illustrated in **Figure 1**.

Oral appliance treatment procedures

For patients who report having the signs or symptoms listed in **Table 1**, the first step is a referral to a sleep physician. If the physician diagnoses the patient as a non-apnoeic snorer or recommends oral appliances for actual OSA, they will refer the patient back to the dentist. The dentist then assesses the patient's suitability for oral appliance treatment. If they are suitable, then impressions and a particular type of protrusive record are made. When the appliance comes back it is fitted and titrated forward gradually over time, until the symptoms are relieved and any symptoms or side effects from oral appliance usage are minimised. Titration involves adjustment of the degree of mandibular protrusion to its optimal level. At that point the patient is sent back to the sleep physician for a review, and in some cases a follow-up sleep study is done to assess treatment efficacy. The physician and dentist decide at that point what the plan is for the future, depending on the performance of the appliance and any side effects that may have arisen.

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Smoking cessation and the role of the dental practitioner

Abstract

As dentists we are uniquely positioned to influence the rate of tobacco smoking and could contribute to a decrease in the associated mortality and morbidity. The detrimental effects of smoking on oral health are well established; thus, a structured approach to initiate smoking cessation, help to manage the initial phase of withdrawal symptoms, and provide long-term support is an important role for our profession. It has been shown that smoking cessation advice for even a few minutes increases long-term smoking abstinence rates by 5%, which can be increased by 50-70% with the use of adjunctive pharmacotherapy, e.g., nicotine replacement therapy, for withdrawal symptoms. This article aims to give a brief overview of smoking in relation to oral health, review the management of tobacco smoking dependence, and discuss how we as dentists can help our patients to quit smoking.

Journal of the Irish Dental Association 2015; 61 (2): 90-92.

Introduction

Most people are aware that tobacco smoking has serious effects on health and that it is the leading cause of preventable death worldwide.[1] In spite of this, data from the Health Service Executive (HSE) from December 2013 show that 22.9% of the male and 20.2% of the female population in Ireland smokes tobacco.[2] Although the negative effects of smoking, including cancer, cardiovascular disease and lung disease, are well recognised by smokers, they consistently underestimate their own risk of developing disease. A similar pattern of underestimation of their own risk appears to hold true for the association between smoking and oral cancer, although the general awareness that smoking can cause oral cancer is significantly lower than knowledge of the risk of cardiovascular/lung disease.[3] In an effort to raise public awareness of oral cancer, the annual Mouth Cancer Awareness Day (MCAD) was introduced in 2010 in Ireland. In the MCAD campaign for the prevention and early diagnosis of oral cancer, a key message is the importance of smoking cessation in decreasing the risk of developing oral cancer.[4,5]

The negative effects of smoking on oral health are many and range from halitosis, unsightly staining of teeth, and black hairy tongue, to periodontal disease and squamous cell carcinoma of the oral mucosa. It has been estimated that up to 50% of all periodontal disease, 91% of all oral cancer in males, and 59% of oral cancer in females may be associated with smoking.[6-8] In a recent study it was shown that 90.6% of oral and pharyngeal cancers in the UK are linked to lifestyle: 93% in males and 85% in females.[9] The majority of these were estimated to result from smoking.[9] The benefits of smoking cessation with regard to oral health should prompt action by the dentist. Directed questions about our patients' smoking habits must be part of all dental assessments.

Discussion

Smoking and oral health

It is estimated that more than 50% of all smokers visit a dentist every year; hence, this is an opportunity to inform them about the risks of smoking and what benefits smoking cessation has on oral health, and health in general.[10] The negative effects of smoking on the oral cavity are numerous (**Table 1**). Although oral cancer represents the most serious complication, only two out of three of the UK population is aware that smoking may cause oral cancer.[3] There is no reason to believe that awareness is any higher in Ireland. The low public awareness of oral cancer results in late presentation, with advanced stages of disease and decreased survival rates as a result. The dentist has a central role to play to increase awareness of the association between smoking and oral cancer, and in the early detection of oral cancer.

The short-term benefits of smoking cessation with regard to oral health include less halitosis, and less discolouration of teeth and fillings. Smoking cessation also results in a decreased risk of developing complications after invasive dental procedures such as periodontal surgery and dental extraction, including

Leo F.A. Stassen
FRCS (I), FDSRCS, MA, FTCD, FFSEM, FFDRCSI, FICD
St James's Hospital, Dublin 8

Oscar Hammarfjord MScDS PhD
St James's Hospital, Dublin 8

Corresponding author:
Leo F.A. Stassen
National Maxillofacial Unit
St James's Hospital
James's Street, Dublin 8
T: +353 1 410 3860
F: +353 1 416 2055
E: stassen@tcd.ie

lowering the risk of developing alveolar osteitis ('dry socket').[11-13] Moreover, it has been shown that smoking increases the failure rate of dental implants, as well as impairing the aesthetic outcome of dental implant treatment, due to failure of papilla regeneration and increased gingival recession.[14,15] Smoking cessation plays a role in preparing the patient for any dental treatment.

The long-term beneficial effects of smoking cessation include decreased progression of periodontal disease and a decreased risk of oral cancer.[8] Oral cancer constitutes 2-3% of all cancers worldwide and carries a high mortality rate.[16] It has been shown that smokers have a two- to five-fold increased risk of developing oral cancer and that this risk is dose dependent, i.e., the risk increases with the number of cigarettes and the years of use.[8] The risk of developing oral cancer further increases if smoking is combined with excessive alcohol intake, which acts synergistically to increase the risk.[11] There is no way at present to predict which patients will develop oral cancer. Thus, the only way to protect against oral cancer is smoking cessation and to decrease alcohol intake to lower and safer levels.

Diagnosing tobacco dependence

Nicotine is a highly addictive substance with physiological and psychological effects. It is known that nicotine, via actions on pre- and postsynaptic nicotinic receptors, affects a wide array of neurological functions by modulating the release of various neurotransmitters such as acetylcholine, serotonin, noradrenaline and dopamine. Thus, nicotine has several possible effects that could cause dependence. One mechanism for this has been shown to involve the mesolimbic dopaminergic system in the reinforcing effects of nicotine.[17] The Diagnostic and Statistical Manual of Metal Disorders, fourth edition (DSM-IV) and the International Classification of Diseases, 10th revision (ICD-10) criteria for nicotine dependence could be used for its diagnosis; however, in clinical practice, a formal diagnostic assessment of nicotine dependence is seldom warranted. Many patients with nicotine dependence are aware of their addiction and a history of previously failed cessation attempts is common. It is important to take a detailed history of the patient's tobacco habits including quantity, modality and length of use. The Fagerström Test for Nicotine Dependence (FTND) could be used to assess the degree of nicotine dependence and studies have shown that the score from the FTND correlates with the risk of cessation failure.[18,19] It is important to discuss previous cessation attempts with patients in order to identify potential blockages for successful treatment.

Treatment of tobacco smoking dependence

Brief intervention

It is estimated that, in developed countries, approximately 30-40% of all smokers try to stop smoking in any given year, but only 2-3% succeed long term.[20] Interestingly, the long-term success rate can be doubled to about 5% by a three-minute brief intervention by the patient's general practitioner.[21] The general dental practitioner could probably achieve similar results, and it has been shown that brief intervention by a dental practitioner can result in cessation rates of 5-12%.[22] A brief intervention is when a general medical or dental practitioner gives advice regarding the benefits of smoking cessation to the patient. This advice is to motivate and help the patient to stop smoking. It has been shown that focusing on short-term benefits is more effective than focusing on long-term risks.[21] A brief intervention typically involves identification of the problem, i.e., establish that the patient has an addiction, assess if the patient has considered stopping smoking, assess their level of motivation, provide support and guidance, and arrange follow-up to monitor progress, assess drug compliance, and provide encouragement.[20] Currently, the Quit campaign (www.quit.ie) by the HSE provides a good source of information for both patients and healthcare providers regarding smoking cessation.

Table 1: Selected reviews on tobacco smoking in relation to oral health.

Area of oral health	See Reference
PERIODONTOLOGY	28, 29
IMPLANTOLOGY	30
DENTAL CARIES	31
ORAL CANCER	20
ENDODONTICS	32

Nicotine replacement therapy

A Cochrane report published in 2008 concluded that the percentage of successful smoking cessation could further be increased by 50-70% by the addition of pharmacotherapy, such as nicotine replacement therapy (NRT), when compared to brief intervention.[23] This Cochrane report suggests that NRT obtained without prescription appears to have similar efficacy as when prescribed.[23] Thus, a brief intervention combined with advice regarding NRT has a significant positive effect on the smoking cessation rate.

NRT is used to reduce the intensity of the withdrawal symptoms on smoking cessation and in weaning doses of nicotine for about eight to 12 weeks after smoking cessation.[20] The aim of NRT is to increase the cessation rate and reduce the relapse rate. NRT can be delivered by a wide array of technical modalities, including transdermal patches, chewing gum, lozenges, nasal spray and, more recently, via electronic cigarettes. NRT has a good overall safety profile and is available in Ireland as over-the-counter preparations. The various modalities of nicotine administration have many similarities, but with a few differences. Nasal sprays have a more rapid nicotine delivery than other NRTs. The plasma nicotine peak is reached with a similar speed to smoking.[24] This might be of benefit when treating highly addicted patients. However, there is an increased risk of unintended long-term use.[25]

Recently, electronic cigarettes have emerged as a new NRT modality. A Cochrane report published in December 2014 concluded that electronic cigarettes are more effective than placebo, but the confidence in this result is rated as 'low' by GRADE standards.[26] This Cochrane report found no evidence that short-term electronic cigarette use is associated with health risk.[26] The long-term effects of electronic cigarettes on lung function and risk of oral cancer are not known. Today the effectiveness of electronic cigarettes as a smoking cessation tool is unclear, as is the role of electronic cigarettes as an instrument to reduce disease burden. It has been suggested that conventional NRT is to be recommended until electronic cigarettes have been longitudinally evaluated.[27] The recent Cochrane review concluded that more studies on electronic cigarettes are needed and it stated that there are currently a number of ongoing studies aiming to assess the efficacy and safety of electronic cigarettes.[26]

Conclusions

To optimise treatment outcomes in dentistry, be it composite fillings, extractions, or periodontal therapy to reduce the risk of developing oral cancer, it is in the interest of all dental practitioners to actively try to influence their patients to stop smoking. Since patients commonly return to the same dental practitioner for many years, this provides a unique opportunity for health-promoting initiatives such as smoking cessation. Given that brief intervention in combination with over-the-counter pharmacotherapy, e.g., NRT, has a proven efficacy in increasing the success rate of smoking cessation, this provides a scientific basis on which dental practitioners can offer help and support for their patients who smoke tobacco. Also, long-term support can easily be delivered by a few directed questions and encouragement during routine examinations. We suggest that every dental assessment should include a detailed history regarding tobacco use, and advice and support about smoking cessation should be offered.

References

1. **Brundtland, G. H.** Achieving worldwide tobacco control. *JAMA* 2000; 284: 750-751.
2. **HSE.** Ireland: Current trends in cigarette smoking. Available from: http://www.ntco.ie/research.asp.
3. **Warnakulasuriya, K.A., Harris. C.K., Scarrott. D.M., Watt, R., Gelbier. S., Peters, T.J., *et al.*** An alarming lack of public awareness towards oral cancer. *British Dental Journal* 1999; 187: 319-322.
4. **MacCarthy, D., Nunn. J., Healy, C.M., Stassen, L.F., Gorman, T., Martin, B., *et al.*** Outcomes from the first mouth cancer awareness and clinical check-up day in the Dublin Dental University Hospital. *Journal of the Irish Dental Association* 2012; 58: 101-108.
5. **Waldron, C., Cronin, O., Guray, A., Hynes. A., McGovern. C., Ryan., M.** Results of data gathered at a smoking cessation counselling stand in the Dublin Dental University Hospital on Mouth Cancer Awareness Day 2012. *Journal of the Irish Dental Association* 2013; 59: 308-310.
6. **Tomar, S.L., Asma, S.** Smoking-attributable periodontitis in the United States: findings from NHANES III. National Health and Nutrition Examination Survey. *Journal of Periodontology* 2000; 71: 743-751.
7. **Shopland, D.R.** Tobacco use and its contribution to early cancer mortality with a special emphasis on cigarette smoking. *Environmental Health Perspectives* 1995; 103 (Suppl. 8): 131-142.
8. **Winn, D.M.** Tobacco use and oral disease. *Journal of Dental Education* 2001; 65: 306-312.
9. **Parkin, D.M., Boyd, L., Walker, L.C.** 16. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. *British Journal of Cancer* 2011; 105 (Suppl. 2): S77-81.
10. **Tomar, S.L., Husten, C.G., Manley, M.W.** Do dentists and physicians advise tobacco users to quit? *J Am Dent Assoc* 1996; 127: 259-265.
11. **Vellappally, S., Fiala, Z., Smejkalova, J., Jacob, V., Somanathan, R.** Smoking-related systemic and oral diseases. *Acta Medica (Hradec Kralove)* 2007; 50: 161-166.
12. **Bowe, D.C., Rogers, S., Stassen, L.F.** The management of dry socket/alveolar osteitis. *Journal of the Irish Dental Association* 2011; 57: 305-310.
13. **Meechan, J.G., Macgregor, I.D., Rogers, S.N., Hobson, R.S., Bate, J.P., Dennison, M.** The effect of smoking on immediate post-extraction socket filling with blood and on the incidence of painful socket. *British Journal of Oral and Maxillofacial Surgery* 1988; 26: 402-409.
14. **Hinode, D., Tanabe, S., Yokoyama, M., Fujisawa, K., Yamauchi, E., Miyamoto, Y.** Influence of smoking on osseointegrated implant failure: a meta-analysis. *Clinical Oral Implants Research* 2006; 17: 473-478.
15. **Raes, S., Rocci, A., Raes, F., Cooper, L., De Bruyn, H., Cosyn, J.** A prospective cohort study on the impact of smoking on soft tissue alterations around single implants. *Clinical Oral Implants Research* 2014. [ePub ahead of print.]
16. **Reibel, J.** Tobacco and oral diseases. Update on the evidence, with recommendations. *Medical Principles and Practice* 2003; 12 (Suppl. 1): 22-32.
17. **Corrigall, W.A., Franklin, K.B., Coen, K.M., Clarke, P.B.** The mesolimbic dopaminergic system is implicated in the reinforcing effects of nicotine. *Psychopharmacology* 1992; 107: 285-289.
18. **Fagerstrom, K.O., Schneider, N.G.** Measuring nicotine dependence: a review of the Fagerstrom Tolerance Questionnaire. *Journal of Behavioral Medicine* 1989; 12: 159-182.
19. **Kozlowski, L.T., Porter, C.Q., Orleans, C.T., Pope, M.A., Heatherton, T.** Predicting smoking cessation with self-reported measures of nicotine dependence: FTQ, FTND, and HSI. *Drug and Alcohol Dependence* 1994; 34: 211-216.
20. **Warnakulasuriya, S., Sutherland, G., Scully, C.** Tobacco, oral cancer, and treatment of dependence. *Oral Oncology* 2005; 41: 244-260.
21. **Austoker, J., Sanders, D., Fowler, G.** Smoking and cancer: smoking cessation. *BMJ* 1994; 308: 1478-1482.
22. **Warnakulasuriya, S.** Effectiveness of tobacco counseling in the dental office. *Journal of Dental Education* 2002; 66: 1079-1087.
23. **Silagy, C., Lancaster, T., Stead, L., Mant, D., Fowler, G.** Nicotine replacement therapy for smoking cessation. *The Cochrane Database of Systematic Reviews* 2004; (3): CD000146.
24. **Sutherland, G., Russell, M.A., Stapleton, J., Feyerabend, C., Ferno, O.** Nasal nicotine spray: a rapid nicotine delivery system. *Psychopharmacology* 1992; 108: 512-518.
25. **Sutherland, G., Stapleton. J.A., Russell, M.A., Jarvis, M.J., Hajek, P., Belcher, M. *et al.*** Randomised controlled trial of nasal nicotine spray in smoking cessation. *Lancet* 1992; 340: 324-329.
26. **McRobbie, H., Bullen, C., Hartmann-Boyce, J., Hajek, P.** Electronic cigarettes for smoking cessation and reduction. *The Cochrane Database of Systematic Reviews* 2014; 12: CD010216.
27. **Drummond, M.B., Upson, D.** Electronic cigarettes. Potential harms and benefits. *Annals of the American Thoracic Society* 2014; 11: 236-242.
28. **Fiorini, T., Musskopf, M.L., Oppermann, R.V., Susin, C.** Is there a positive effect of smoking cessation on periodontal health? A systematic review. *Journal of Periodontology* 2014; 85: 83-91.
29. **Chambrone, L., Preshaw, P.M., Rosa, E.F., Heasman, P.A., Romito, G.A., Pannuti, C.M. *et al.*** Effects of smoking cessation on the outcomes of non-surgical periodontal therapy: a systematic review and individual patient data meta-analysis. *Journal of Clinical Periodontology* 2013; 40: 607-615.
30. **Clementini, M., Rossetti, P.H., Penarrocha, D., Micarelli, C., Bonachela, W.C., Canullo, L.** Systemic risk factors for peri-implant bone loss: a systematic review and meta-analysis. *International Journal of Oral and Maxillofacial Surgery* 2014; 43: 323-334.
31. **Benedetti, G., Campus, G., Strohmenger, L., Lingstrom, P.** Tobacco and dental caries: a systematic review. *Acta Odontologica Scandinavica* 2013; 71: 363-371.
32. **Walter, C., Rodriguez, F.R., Taner, B., Hecker, H., Weiger, R.** Association of tobacco use and periapical pathosis – a systematic review. *International Endodontic Journal* 2012; 45: 1065-1073.

Mandibular implant-supported overdentures: attachment systems, and number and locations of implants – Part I

Abstract

The use of dental implants in replacing missing teeth is an integral part of restorative dental treatment. Use of conventional complete dentures is associated with several problems such as lack of denture stability, support and retention. However, when mandibular complete dentures were used with two or more implants, an improvement in the patients' psychological and social well-being could be seen. There is general consensus that removable implant-supported overdentures (RISOs) with two implants should be considered as the first-choice standard of care for an edentulous mandible. This treatment option necessitates the use of attachment systems that connect the complete denture to the implant. Nevertheless, each attachment system has its inherent advantages and disadvantages, which should be considered when choosing a system. The first part of this article provides an overview on options available to restore the mandibular edentulous arch with dental implants. Different types of attachment systems, their features and drawbacks are also reviewed.

Keywords: dental implant; mandibular overdenture; implant-supported overdenture; implant-retained overdenture; overdenture attachment system; patient satisfaction.

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Abdulhadi Warreth
BDentSc MDentSc MFDRCSI PhD
Trinity College Dublin

Aslam Fadel Alkadhimi
BA BDentSc
Trinity College Dublin

Ahmed Sultan
BA BDentSc
Brigham and Women's Hospital, Boston, MA, USA
and
Harvard School of Dental Medicine, Boston, MA, USA

Caroline Byrne
BA PhD
Trinity College Dublin

Edel Woods
BCL LLM
Trinity College Dublin

Corresponding author:
Dr Abdulhadi Warreth, Division of Restorative Dentistry and Periodontology, Dublin Dental University Hospital, Lincoln Place, Dublin 2
E: warrethab@dental.tcd.ie

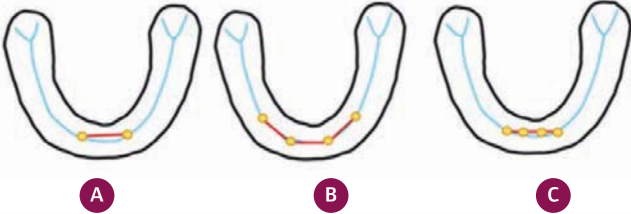


FIGURE 1: A schematic representation of U-shaped mandibular edentulous ridges. Two implants are splinted with a single bar (A) around which a rotational movement of the overdenture may occur. In (B), four implants are placed in the anterior region of the mandible and connected with a bar of three segments. In this case, the bar can be cantilevered on both sides distal to the terminal abutments. In (C), four implants are placed on the same line. The spaces between the implants are limited; therefore, a clip with an adequate length that provides the required retention is not achievable (modified from Mericske-Stern et al.*).*[12]

TABLE 1: Comparisons between RISOs and FISOs that are used in restoring the edentulous mandible.

Removable implant-supported overdenture (RISO)	Fixed implant-supported overdenture (FISO)
Can be removed by the patient	Cannot be removed by the patient
May be implant-supported or implant-tissue-supported	Only implant-supported
Different attachment types: individual or splinted	Two types: hybrid or porcelain-fused-to-metal
Loss of soft and hard tissue can be compensated for more easily	Loss of soft and hard tissue may be more difficult to compensate
Less expensive	More expensive
Less risk association	Associated with more risk to the patient and tissues

Introduction

Despite the decline in the prevalence of edentulism (complete loss of teeth), there is a high number of patients who are completely edentulous[1] and wearing conventional complete dentures.[2] Before the era of dental implants, complete edentulous jaws were restored with conventional complete dentures, as this was the only option available.[3] Use of conventional complete dentures is associated with several problems, such as lack of denture stability, support and retention.[4] These problems lead to discomfort, reduction in chewing ability and, at times, may be socially embarrassing. Consequently, the patients' psychological and social well-being are negatively affected. In certain clinical situations, denture fixatives may offer a solution, but this approach is not always practical or cost-effective.[5] Therefore, several surgical techniques have been used to improve the conventional complete denture outcome.[6,7] However, surgical approaches are not without risks and may lead to several complications and improper treatment results.[8] Thus, dental implants may provide a solution to these problems. The routine use of an implant with a complete denture is associated with improvements in retention, stability, function, perception and comfort.[9,10] Hence, an edentulous mandible may be restored with a fixed or removable implant-supported complete denture. The fixed prosthesis has the advantage of being secured to the implants and is not removed by the patient. However, it is expensive, as more implants are required to support it, and it is technically more demanding than the removable prosthesis. On the other hand, removable implant-supported/retained overdentures (RISOs) result in an aesthetically more pleasing outcome, better access for oral hygiene, lower cost and use of fewer implants compared to fixed implant-supported/retained overdentures (FISOs).[11,12] Phonetics may also be improved and lip support can be enhanced with the use of RISOs as the lost tissue can be compensated for by the denture.[11] RISOs provide an alternative option when financial constraints preclude the use of an FISO. It is also a solution in certain complex restorative situations where the missing teeth are associated with soft tissue and bone loss, and both require replacement. Therefore, RISOs may provide a solution to the problems linked to the use of conventional complete dentures or FISOs.

The use of the mandibular conventional complete denture is more problematic than that of the maxillary conventional denture due to several factors such as thin mucosal coverage of the edentulous ridge, a reduced support area and the mobility of the floor of the mouth, the movement of the mandible and the tongue.[10] These factors make the use of dental implants and attachments a common practice to overcome their adverse consequences.

The aim of this article is to provide the reader with an overview of the prosthetic options available to restore the edentulous mandible. Different attachment systems, which are commonly used with RISOs, and factors that should be considered when a treatment plan is made, are also presented.

Fixed implant-supported/retained overdentures

As the name indicates, this type of prosthesis cannot be removed by the patient. It is indicated when the bone volume and quality are adequate to place the required number of implants (usually four or more). When all other factors, such as complexity and costs of such treatment, are considered, the FISO is a favourable option for many patients. A fixed-cantilever prosthesis can be used when four implants are placed in the anterior region of the mandible. More implants, which are well distributed in the anterior and posterior regions of the mandible, can also be used. The FISO design results in reduction in soft tissue damage and the tissue coverage by the prosthesis is reduced. However, the differences in surgery and costs between the removable and fixed prostheses should be considered when a comparison between the two is made. FISOs are of two basic types: hybrid and porcelain-metal. The hybrid prosthesis is made of metal substructure, acrylic and denture teeth. It is indicated when the vertical restorative space is adequate to accommodate the prosthesis, or even increased, as this increase can be filled with acrylic to achieve good aesthetic

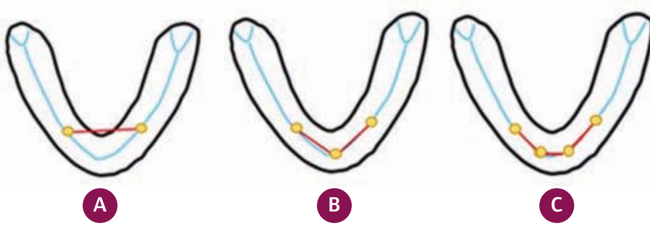


FIGURE 2: A schematic representation of v-shaped (narrow) mandibular edentulous ridges. A bar attachment on two implants (splinted) is not always indicated as it may encroach on the tongue space and interfere with function (A). Three implants connected with two bar segments is indicated when good retention and stability are not possible with two non-splinted implants (B). Four splinted implants with three segments can also be used with an RISO and a fixed prosthesis (modified from Mericske-Stern et al.).[12]

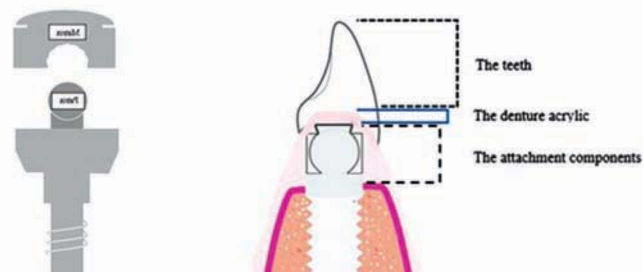
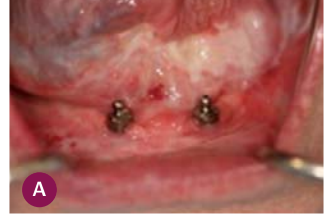


FIGURE 3: A schematic representation of the ball attachment system showing the vertical restorative space required when a ball attachment system is used. Room for the attachment components, denture acrylic base and the denture teeth is needed.



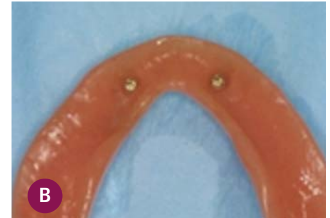


FIGURE 4: Clinical picture of an edentulous mandible with two ball attachments (Dalbo® ball attachment) placed in the inter-canine region (A) and the fitting surface of the denture with two patrices of the attachment (B). The RISO is attached to the attachment in the mouth (C).

results. Also, acrylic teeth are more resilient; therefore, they can reduce the impact of occlusal loading. On the other hand, the porcelain-metal fixed prosthesis is made of metal substructure and porcelain in a similar way as that used in the fabrication of the conventional porcelain fused to metal fixed prosthesis. It is more expensive than the hybrid and is difficult to make, but it is a useful option when the vertical restorative space is limited.

Removable implant-supported and implant tissue-supported overdentures

RISOs can be classified based on their source of support. The support during function may be obtained solely from the implants (mainly implant borne). In this case, the mucosa of the edentulous ridge does not take part in the supporting mechanism. Thus, RISOs should be denoted as implant-supported overdentures (**Figure 1**). Here, RISOs are usually entirely supported by multiple implants that are rigidly connected with a bar or a combination of bars, and other individual attachments.[13] Therefore, an adequate number of implants is required.

When an overdenture gains its support from both the implant and the tissue, it should be called an implant-tissue-supported overdenture (implant-mucosa-borne).[13] In such cases, fewer implants are required. RISOs are attached to the implants, usually in the form of a bar, balls, Locators, magnets or telescopic attachments that permit movement of the overdenture during function and allow the mucosa of the residual ridge to be involved in dissipating the imposed force. Comparisons between RISOs and FISOs that are used in restoring the edentulous mandible are presented in **Table 1**.

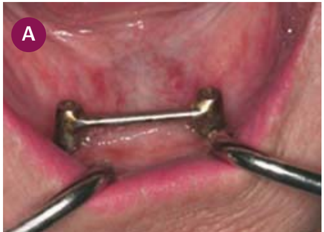
It is important to mention that as all prostheses are retained by implants, the term implant-retained prosthesis is not precise, is confusing, and therefore should be avoided.

Attachment systems

An attachment is a mechanical device used for the fixation, retention and stabilisation of a dental prosthesis.[5] Five types of attachment systems are available and compatible with the main implant systems. Each attachment system has inherent attributes and drawbacks, and must be chosen with the particular patient profile in mind. The attachment systems that are commonly used with RISOs include: bar/clip; ball; resilient patrix; magnetic; and, telescopic. While the bar system is used in a splinting manner, the other attachments may be used individually (non-splinted) or in combination with the bar system (see below). Attachment systems may also be classified as resilient joints (connectors), when movements between parts of the attachment occur, or rigid joints, when such movements do not occur.[14]

A. Bar/clip attachment system

In this system of attachment, the implants are connected with a bar, which represents the anchor that retains the denture and gives it support (**Figures 1**, **2** and **4**). An element that fits on the bar is usually in the form of a clip (sleeve/channel) that is attached to the fitting surface of the overdenture. The bar may have various cross-sections, such as a reverse U-shape (rigid joint) or egg-shape or circle (resilient joint). The bar may be made from pre-milled plastic patterns (castable) or prefabricated from gold, such as the Dolder® bar. It may also be produced by CAD/CAM technology. The bar should be rigid enough to prevent its distortion. The clip may be rigid, e.g., made of gold (i.e., Dolder®), or resilient, e.g., made of plastic (i.e., Hader®).



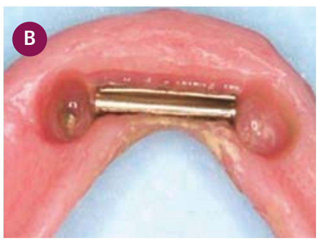
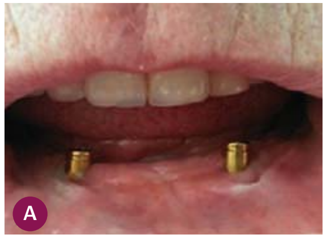


FIGURE 5: A clinical picture of a bar attachment system in which two implants are connected with the bar for an RISO (A). A metal clip is attached to the fitting surface of the denture (B). Note the space created in the fitting surface that accommodates the two implants. Calculus deposition can be seen in B.



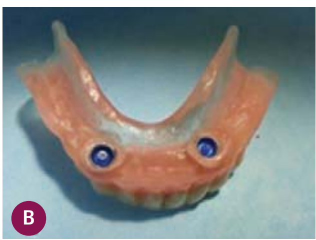


FIGURE 6: Clinical picture of an edentulous mandible with two resilient attachments (Locator® attachment) placed in the inter-canine region (A). The abutments are invading the restorative space; shorter abutments may be more suitable in this case. The fitting surface of an RISO with two patrices of the Locator attachment can be seen in (B). A schematic representation of the Locator attachment system showing the dual retention mechanism can be seen in (C): patrix (red), matrix (yellow) and metal cap (grey).

TABLE 2: Characteristics of attachment systems used for RISOs.
1. The different designs of the attachment systems are used to gain retention, support and stability of the overdenture.
2. They consist of a matrix and a patrix: • the matrix accommodates the patrix; and, • the patrix frictionally fits and engages the matrix.
3. The joint that is made between the patrix and the matrix may be rigid (when no movements exist between the patrix and matrix) or resilient (when there are movements).
4. The involved dental implants are either splinted or non-splinted.
5. A bar is usually used to connect the implants (splinted).
6. Bars may be custom made, prefabricated (readymade) or CAD/CAM milled.
7. An individual attachment system is usually used in a non-splinted manner or combined with a bar system.
8. The individual system consists of a ball, a resilient patrix, a magnet or a telescopic crown attachment.

With bar attachments, retention and stability are improved and less screw loosening and bone resorption occur.[15] However, the most common mechanical complication of a bar attachment system is the loosening of abutment screws[16] and attachment elements, as well as fractured dentures.[17]

In a situation where the use of two implants is recommended, the two implants are usually placed in a straight-line relationship and ideally on the crest of the ridge. A single straight bar is suitable in a patient with a square arch. However, a straight bar may not be a suitable option when the anterior part of the mandible is narrow, as the bar will impinge on the tongue space if the implants are placed in the canine region. Bar attachments can be used with multiple implants, i.e., four implants that are connected with three bars (**Figures 1** and **2**). They can also be used with four implants that are connected only on the sides with no cross arch connection. In situations where denture stability is not optimum (e.g., severely resorbed ridges), the stability can be improved by the use of bar attachments rather than the use of individual attachments.

However, replacement of retentive parts when they are damaged may require sending the overdenture to the laboratory for repair, which leaves the patient without his/her denture for some time. Furthermore, a minimum of 12mm of vertical restorative space is usually required with this system (**Figure 5**). An example of a bar system that is widely used is the Dolder® bar (Sterngold), which has two different cross-sections – either parallel sides (reverse U-shaped) or gingival taper (egg-shaped).

The Hader® bar (Sterngold) is an example of a resilient joint attachment. The clip is made of nylon that has three different colour-coded retention strengths. In general, resilient clips are easy to replace and cheaper than the metal clips. Conversely, replacement of a metal clip requires cutting the clip off the denture base and its pickup clinically using auto-polymerising acrylic. However, the nylon clip cannot be adjusted or reactivated as with the metal clip, and more frequent replacement may be required.

The CAD/CAM bars are made from a block of commercial pure titanium or titanium alloy. Commonly, the denture is made and the stone cast and wax setup are scanned optically to generate their exact 3D images.[18] The information is sent to the milling machine to form the bar. The CAD/CAM technology reduces certain human errors; therefore, milled bars are usually of high quality and are porosity free.

Examples of CAD/CAM milled bars are the ISUS® bar (Dentsply Prosthetics), the Nobel Procera® implant bar overdenture (NobelBiocare), and CAM StructSure® precision milled bars (Biomet 3i).

B. Ball attachment systems

This system consists of a retentive patrix, which is part of an abutment that is screwed into the implant (**Figures 3** and **4**). The patrix has the shape of a small

FIGURE 7: A magnet attachment (magnet (A) and abutment (B)). The abutment is usually attached to the implant while the magnet is attached to the fitting surface of the overdenture.

ball with different diameters and is typically made of metal alloy. The system also has a matrix, which is attached to the fitting surface of the denture and into which the patrix fits. The matrix can be composed of metal or resilient nylon. In one ball attachment system known as the O-ring attachment, a plastic ring is fitted in a groove inside a metal ring or socket, which is housed in the fitting surface of the denture.[19]

Some of the advantages of the ball system include ease of maintenance of hygiene around the implant, low cost, minimal chair-side time and ease of replacement of elements if required.[15,19] However, one of the major disadvantages is that the patrix (ball) violates the vertical restorative space because of its high profile as the patrix is standing over the edentulous ridge. As with most other attachment systems, the ball system loses retention by wear of the matrices and patrices. Ball attachments are not suitable to use when the implants are not parallel (an angulation >15°) as retention is reduced significantly.

Examples of the ball attachment systems include the Dal-Ro® (BioMet 3i), the Dalbo (Dalbo-B® and Dalbo-classic®), the dental precision (Cendres+Métaux) and the Preci–Clix® (Preat Corp.). In principle, the Preci–Clix® is similar to the Hader® clip as both systems have resilient (nylon) matrices.

C. Attachments with resilient patrices

This type of attachment is like a resilient joint, as certain movements can occur in the joint. This is due to the fabrication material of the patrix element: nylon. One of the most widely used resilient attachments is called Locator® (Locator abutments, Zest Anchors). The Locator attachment system consists of an abutment, which is attached to the implant and contains a matrix. It also has a patrix element that is a polymer (nylon) insert, which is housed in a metal cap and provides retention. The cap is attached to the fitting surface of the denture and is made of titanium alloy (**Figure 6**). Locator attachment features what is known as a dual retention, as it consists of frictional and mechanical retentions. The frictional retention is provided by the nylon patrix head, which is slightly oversized compared to its matrix component. The mechanical retention is gained by a shallow undercut on abutment in which the outer margin of attachment is snapped (**Figure 6**). Therefore, the patrix, when fully seated in the matrix, engages the outer and inner surface of the matrix part (dual retention). Locator patrices have different retention ranges and strengths. This type of attachment is also characterised by its low vertical profile and the patrix has a self-aligning feature.

Locator attachments can be used when the implants are non-parallel with angulations of up to 40° without a significant negative effect on their retention. Locators represent a universal resilient attachment as almost all types of denture movements can occur. This system can be easily repaired or replaced. Another example of a resilient patrix attachment system is the Extra-coronal Resilient Attachment (ERA®, Sterngold) (**Table 2**).

D. Magnetic attachments

This type of attachment system was originally used in the form of open-field aluminium-nickel-cobalt alloys that were embedded in the opposing maxillary and mandibular denture bases. The repellent forces would have kept the dentures in their intended position over the edentulous ridges. The retention that is obtained by this method is unreliable and weak, and the alloys are easily corroded.[18] In more recent magnetic attachment systems, an abutment, also known as the keeper, is attached to the implant by a screw, while a magnet is attached to the fitting surface of the denture (**Figure 7**). The magnets are usually encapsulated by a corrosion-resistant tight sealer because corrosion of the magnet leads to loss of its attractive force.[20] These relatively new magnetic attachment systems provide more stability and greater attractive forces than those produced by the old magnetic system (**Table 2**).

The magnetic attachment systems' retentive capacity is not affected by the implant degree of divergence; thus, they can retain their attractive force when the implants are not parallel.[39] It also has a low profile. By the use of this system, RISOs are relatively easy to place and remove, which is an advantage for elderly patients or those with a limited ability to tolerate or control removable dentures.[21]

E. Telescopic crown attachments

These attachments consist of a patrix, which is attached to the implant, and a matrix, which is contained within the fitting surface of the denture.[12] Retention is achieved through frictional contact between the matrix and the patrix in a similar way to that which occurs in most of the other attachment systems (**Table 2**).[18] One distinctive advantage of the telescopic attachment is that the retention gained by the telescopic system may be increased with time, which is possibly a result of the increased adaptation between the patrix and matrix (**Table 2**).[18,22]

When telescopic attachments are used, significant amounts of masticatory forces are transferred to the supporting implant, while a minimum masticatory loading is transferred to the residual alveolar ridge. Thus, the implant and its component are exposed to high stress that may lead to their fatigue and failure.

Part II of this article will appear in the June/July edition of the *Journal of the Irish Dental Association*.

Predicting severe pain after root canal therapy in the National Dental PBRN

Law, A.S., Nixdorf, D.R., Aguirre, A.M., Reams, G.J., Tortomasi, A.J., Manne B.D., et al.

Some patients experience severe pain following root canal therapy (RCT) despite advancements in care. We sought to identify factors, which can be measured preoperatively, that predict this negative outcome so that future research may focus on preemptive steps to reduce postoperative pain intensity. Sixty-two practitioners (46 general dentists and 16 endodontists) who are members of the National Dental Practice-Based Research Network enrolled patients receiving RCT for this prospective observational study. Baseline data collected from patients and dentists were obtained before treatment. Severe postoperative pain was defined based on a rating of ≥7 on a scale from 0 (no pain) to 10 (pain as bad as can be) for the worst pain intensity experienced during the preceding week, and this was collected one week after treatment. Multiple logistic regression analyses were used to develop and validate the model. A total of 708 patients were enrolled during a six-month period. Pain intensity data were collected one week postoperatively from 652 patients (92.1%), with 19.5% (n=127) reporting severe pain. In multivariable modelling, baseline factors predicting severe postoperative pain included current pain intensity (odds ratio [OR], 1.15; 95% confidence interval [CI], 1.07 to 1.25; P=0.0003), number of days in the past week that the subject was kept from their usual activities due to pain (OR, 1.32; 95% CI, 1.13 to 1.55; P=0.0005), pain made worse by stress (OR, 2.55; 95% CI, 1.22 to 5.35; P=0.0130), and a diagnosis of symptomatic apical periodontitis (OR, 1.63; 95% CI, 1.01 to 2.64; P=0.0452). Among the factors that did not contribute to predicting severe postoperative pain were the dentist's specialty training, the patient's age and sex, the type of tooth, the presence of swelling, or other pulpal and apical endodontic diagnoses. Factors measured preoperatively were found to predict severe postoperative pain following RCT. Practitioners could use this information to better inform patients about RCT outcomes and possibly use different treatment strategies to manage their patients.

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Interference between dental electrical devices and pacemakers or defibrillators: results from a prospective clinical study

Elayi, C.S., Lusher, S., Meeks Nyquist, J.L., Darrat, Y., Morales, G.X., Miller, C.S.

Background: The authors aimed to determine whether electrical dental devices would interfere with the function of cardiac pacemakers or implantable cardioverter defibrillators (ICDs) in humans.

Methods: The authors exposed asymptomatic non pacemaker-dependent patients to commonly used electrical dental equipment (for example, battery-operated curing lights, ultrasonic baths, ultrasonic scalers, electric pulp testers and electric toothbrushes) in an outpatient cardiology clinic. The authors operated dental devices at various distances and programmed cardiac devices to sense and pace. The authors obtained cardiac tracings using a cardiac programming unit, and a cardiac provider who noted any interference interpreted the results in real time.

Results: The authors enrolled 32 consecutive patients and tested 12 pacemakers and 20 ICDs. They did not observe any significant clinical interference in sensing and pacing functions in any patient; however, they noted minor interference without clinical impact in the telemetry from the cardiac programming unit during use of the ultrasonic scaler and bath.

Conclusions: The findings of this prospective study suggest that electrical devices commonly used in dental practices do not interfere with the sensing and pacing of contemporary cardiac patients' pacemakers or ICDs. However, they do interfere with the telemetry from the cardiac programming unit, without any clinical impact on patient safety. These findings should help in the development of clinical guidelines regarding dental management of patients with pacemakers or ICDs.

Practical implications: Electrical dental devices (for example, ultrasonic baths, ultrasonic scalers) induced minor interference with programmers that interrogate cardiac devices implanted in patients; however, overall, dental devices do not appear to interfere with pacemakers' and defibrillators' pacing and sensing function.

J Am Dent Assoc 2015;146 (2): 121-128.

Necessity of keratinised tissues for dental implants: a clinical, immunological and radiographic study

Buyukozdemir, A., Berker, E., Akincibay, H., Uysal, S., Erman, B., Tezcan, I., et al.

Background: The necessity of keratinised tissues (KTs) for maintaining health around dental implants (DIs) remains as a controversial issue.

Purpose: The aim of this study was to investigate the effects of KT width (KTW) on peri-implant tissues by evaluating peri-implant clinical and inflammatory parameters.

Materials and methods: Sixty DIs were included in this six-month longitudinal study. After classifying DI based on the presence of KTs at the buccal aspect as with adequate/inadequate KTW, DIs were randomly assigned into three study groups. In the first group, while free gingival graft (FGG) was performed, DIs in the maintenance (M) group were followed up by standardised maintenance procedures at baseline, first, third, and sixth months as with DI with adequate KTW (control). Clinical parameters, peri-implant sulcular fluid (PISF) volume, PISF Interleukin 1 concentration, and bone loss were analysed.

Results: Significant improvements in clinical and immunological parameters were noted only for FGG for the whole study period. Statistical differences detected between the treatment groups (FGG vs. M) were for gingival index at all time points and for PISF volume at sixth month. For the other parameters evaluated, while lower values were observed for FGG, statistically, no differences were noted between the groups.

Conclusions: Based on the results of this study, it can be suggested that FGG performed around DIs lacking KT is a reliable method, leading to significant improvements in clinical and inflammatory parameters. Further long-term studies including more DIs are needed to clarify the role of KT on maintenance of DIs.

Clin Implant Dent Relat Res 2015; 17 (1): 1-12.

Impact of periodontal maintenance on tooth survival in patients with removable partial dentures

Tada S, Allen PF, Ikebe K, Matsuda K, Maeda Y.

Aim: Removable partial dentures (RPDs) may have a negative impact on oral health and have the potential to cause further tooth loss, especially of abutment teeth. However, no evidence indicates the effective interval of regular periodontal maintenance after RPD provision. This practice-based cohort study aimed to examine the impact of regular periodontal maintenance visits on survival of RPD abutment teeth.

Materials and methods: One hundred and ninety-two patients had been previously provided with 304 new clasp-retained RPDs at Osaka University Dental Hospital, Japan. Using the Kaplan-Meier method and log-rank test, 1,094 abutments were analysed to illustrate survival curves and to compare each curve. According to the frequency of periodontal maintenance, study samples were divided into three groups: every three to six months (3-6M group), one-year (1Y group) and no maintenance (NM group).

Results: Seven-year cumulative survival rates were 83.7% (3-6M), 75.5% (1Y) and 71.9% (NM), respectively. Survival of abutment teeth in the 3-6M group was significantly better than in both the 1Y ($p=0.005$) and NM ($p<0.001$) groups.

Conclusion: These longitudinal clinical data indicate that periodontal maintenance at least once in six months had the most favourable outcome. Frequent periodontal maintenance after RPD provision could be effective in preventing further tooth loss.

J Clin Periodontol 2015; 42 (1): 46-53.

QUIZ answers

(Questions on page 76)

1. Modern cements:
   - seal the restoration tooth interface;
   - provide a predictable level of retention;
   - compliment the optical properties of the restoration; and,
   - reinforce or strengthen the restoration.

2. **Restoration** – material properties, marginal fit, type of restoration and surface-conditioning method.
   Cement – viscosity, biocompatibility, adhesive potential, solubility, water uptake, colour stability, wear resistance, working and setting characteristics, sealing ability, and radio-opacity.
   Clinical – occlusion, preparation design, moisture control, type of build-up material, type of supporting tooth structure, surface roughness, margin location, tooth location, and amount of tooth destruction.

3. **Water-based** – glass ionomer cements (Ketac Cem), zinc phosphate (Flecks) cements, polycarboxylate (Durelon).
   Polymerising – resin-modified glass ionomers (Rely X, Fuji plus; an intermediate with elements of water-based and elements of polymerising), BisGMA resin cements (NX3, Variolink, Rely X Unicem) and phosphate resins (Panavia).

4. **A. Metal ceramic or full coverage metal restorations (Figure 3):**
   Providing basic retention and resistance form are satisfactory, then any water-based or polymerising cement will work. For teeth with inadequate preparation height or resistance form, adhesive cements are recommended.
   B. Partial coverage restorations – onlays, inlays:
   For metal-based restorations the same principles apply as full coverage. For ceramic inlays/onlays, adhesive-based cements show double the success rates of water-based (Van Dijken *et al*., 1998, and Gemalmaz *et al*., 2001).
   C. Ceramic veneers (Figure 4):
   Adhesive resins only, with particular attention to the correct surface treatment of both the tooth and restoration.
   D. All-ceramic crowns (Figure 4):
   Dependant on the type of crown used.
   Particle-filled glass ceramics (Empress, E-max) can be etched and show greater strength and increased success rates with adhesive cements bonded (Malament and Socransky, 2001). Polycrystalline ceramics (zirconia based – Procera, Lava and Alumina based) can't be etched or sandblasted effectively, and clinical studies show that there is no significant difference between water-based and polymerising cements (Galindo *et al*., 2006). However, water-based cements may be best avoided since water promotes crack propagation.
   E. Resin-bonded/Maryland bridges:
   Adhesive resins only, with particular attention to the correct surface treatment of both the tooth and restoration.

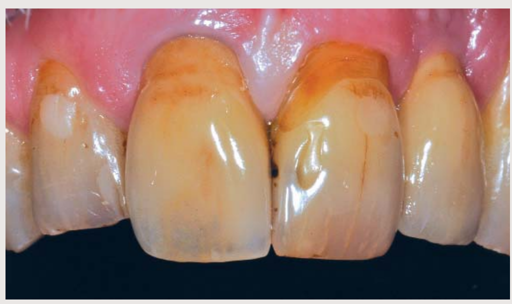


FIGURE 3: Metal ceramic crown UR1 and UL2 – implant crown.

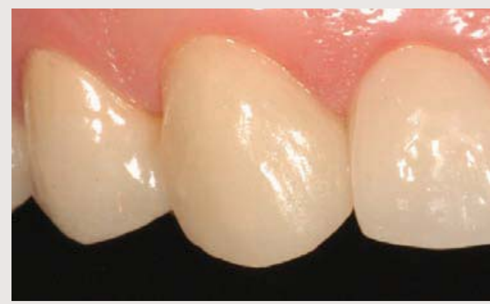


FIGURE 4: Ceramic veneer on UR3 and UR2,4 – Emax crowns.

SITUATIONS WANTED

Hardworking, experienced (10 years+), dynamic dentist available for a part-time (including Saturdays) position in southern area of Dublin. Email: dentissima@outlook.com.

New graduate available. Highly enthusiastic new graduate dentist available for immediate start. Email: youngdentist2015@gmail.com.

Experienced dentist available for work in the Cork city/county area. I have four years' experience in general practice. I am flexible with hours. Locum positions also considered. Email: dentistcork@yahoo.ie.

Friendly, dedicated dentist seeking full/part-time work in/around Cork starting mid June. Three years qualified from UCC, experience in UK – public and private – in Kent and Westminster. 6MS and Invisalign provider. Currently studying MSc at Kings PT. Email: mariesanfey@hotmail.com.

SITUATIONS VACANT

Associate dentist required two to three days per week in Dublin practice. Minimum three years' experience, proven track record in practice building. A keen interest in aesthetic and restorative procedures an advantage. Perfect English essential. Send CV to drpeterdwyer@gmail.com.

North Dublin general practice seeks energetic associate. Part-time position available (Monday and Friday initially, but with a view to expand). Experience an advantage as will be expected to work under own initiative. Immediate start. Email glasnevindental@gmail.com.

Friendly, enthusiastic, flexible and hard-working associate dentist required for busy, long-established private practice in West Dublin. Private practice experience essential (five years+). CV by email. Thank you! Email: dublinwestdental@gmail.com.

Advertisements will only be accepted in writing via fax (01- 295 0092), letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than May 8, 2015, by cheque made payable to the Irish Dental Association. If a box number is required, please indicate this at the end of the ad (replies to box number X). Classified ads placed in the Journal are also published on our website www.dentist.ie for 12 weeks.

Advert size	Members	Non-members
up to 25 words	€75	€150
26 to 40 words	€90	€180

The maximum number of words for classified ads is 40.

If the advert exceeds 40 words, then please contact:
Think Media, The Malthouse, 537 North Circular Road, Dublin 1.
Tel: 01-856 1166 Fax: 01-856 1169 Email: paul@thinkmedia.ie
Please note that all classified adverts MUST come under one of the following headings:

- Positions Wanted
- Positions Vacant
- Practices for Sale/To Let
- Practices Wanted
- Equipment for Sale/To Let

Classified adverts must not be of a commercial nature. Commercial adverts can be arranged by contacting Paul O'Grady at Think Media.

Associate sought, Co. Galway, to work one to two days per week. Immediate start available. Must have minimum two years' experience. Reply with CV, cover letter, references to galwaydent14@gmail.com.

Associate dentist required two to three days per week for busy, modern practice in Virginia, Co. Cavan. Computerised, OPG, hygienist, orthodontist, oral surgeon. Minimum three years' experience. Apply with CV to info@virginiadentalsurgery.com.

Ballincollig, Cork. Full-time, long-term associate required for modern practice in busy multidisciplinary medical centre. Full book of patients available, principal on career break. Five or more years' experience required. Please reply with CV and references. Email: bznz@mail.com.

Position for dental assistant with a view for full associate position, Westmeath location. CV can be send to rsysak@cooledental.com.

Associate dentist position available in south west Dublin. This is a full-time position in a busy, long-established, modern, computerised practice. Would suit an enthusiastic, hard-working dentist looking for a long-term role. Email: tullyhouse@gmail.com.

Midlands. Full-time associate wanted for busy, well-equipped, progressive, modern practice. Full range of patients. 90 minutes from Dublin. City based. Three surgeries – OPG – hygienist. Computerised. Excellent support staff. Immediate start. Good remuneration. Contact: niall@innovativedental.com.

Ambitious dental associate required for Ranelagh practice in a medical centre. Candidate should have at least three years' experience and be capable of running the practice on their own. Possibility of profit sharing in the future. Email CV for more information to andrewcox204@gmail.com.

Associate dentist required for busy practice in Wicklow. Initially two days per week with a view to full time. Would suit a dentist with a longer-term view. For further information contact the practice, Tel: 0404 46728, or Email: info@rathdrumdental.ie.

Full/part-time dentist required in busy modern five-surgery private practice in Cork. Immediate start/long-term view. Must be warm, friendly and have foreign training/experience. Email CV with photo, references and portfolio of work to hr@smilestore.ie.

Dentist required, South Dublin practice. Two to three days to full time. Applicants must be enthusiastic/friendly. Graduates welcome. CV for the attention of Alex to info@whitesmiledental.ie.

Full-time dentist required to replace departing colleague. We are located in Ballinalsoe, Co. Galway. We operate the PPS, Medical Card and private. OPG, intra-oral camera facilities. Full support staff. Reply by email to rothwellauct@eircom.net.

Kilkenny. Experienced (minimum three years), ambitious dentist required for very well established, high profile, busy clinic. Part-time initially with potential to increase over time. Computerised, excellent staff, premises just refurbished. Generous terms for right candidate. Email: kilkennydentaljob@gmail.com.

Dentist required for a very busy dental practice in Newbridge situated in a new primary care centre. Fully computerised, digital radiography and ultra modern equipment. Dental hygienist. Minimum of three years' experience required. Email CV for more information andrewcox204@gmail.com.

Locum needed for busy practice in Co. Wicklow. Two days per week, starting week April 7. Increasing to four days per week starting from week May 4. For duration of three to four months. Please email CVs to ldental99@yahoo.ie or contact 059-648 2749.

West of Ireland. Flexible specialist endodontist required. Multi-centred expanding practice. Definite view to expense sharing. Self-employed status confirmed. Full-time. part-time position? Busy modern practice. Top-class equipped. Computerised. Knowledgeable support staff. Email CV to niall@innovativedental.com.

Oral surgery opportunity. Busy, thriving practice in Munster for sale. Modern fully equipped practice with excellent support team. Large client base, terrific location, fantastic opportunity for hard working oral surgeon. For further information, Email lindaryan001@gmail.com.

South Dublin. Great opportunity for dental specialist to join our newly relocated clinic. Email: info@dermotkavanaghorthodontics.com.

Experienced dental nurse required for general dental practice in Dublin 12. Full-time commencing start of March. CV to laurasoshea@yahoo.co.uk.

Dental nurse required for maternity cover in friendly, modern general practice in South Dublin (Knocklyon). Cover required from June with a possibility to a full-time future position. Applicant must be flexible and have excellent people skills. Email: enrightse@gmail.com.

Qualified dental nurse required on a part-time basis in Tralee, Co. Kerry. Tel: 087 131 9792.

South Tipperary. Nurse/receptionist. Enthusiastic, positive, caring person with a friendly smile wanted to provide extraordinary service for our patients. Part-time/full-time possibilities. CV to dentaljobsouthtipp@gmail.com.

Dental nurse required for maternity cover for general dental practice in Cork City. Commencing start of May. CV to etcdental15@gmail.com.

Full-time dental nursing position has become vacant at Dublin Orthodontics. Experience preferred but not essential. IT skills essential. This position will be in multiple locations. Mon-Fri, 8.00am – 5/6.00pm. No evenings or Saturdays. Salary negotiable. Replies to dearbhla@dublinorthodontics.ie.

Full-time administration/marketing position at Dublin Orthodontics. The job will also involve liaising with IT providers, other third parties, staff rostering and some reception duties. Successful applicant must have excellent people skills, IT skills and an aptitude for figures. Replies to dearbhla@dublinorthodontics.ie.

Dental hygienist wanted, part-time (Friday), for expanding D2 practice. Duties include mix of periodontal and hygiene maintenance treatments. Newly qualified welcome. Friendly personality required. Please send cover letter and CV to vacancies@dentistry.ie.

Dental hygienist required for Dublin City practice – part time, early mornings and late evenings. Team player with excellent clinical and patient management skills. Email: dentaljobs2015@gmail.com.

Hygienist required for full-time position in multi-surgery practice in Westmeath. Some Saturdays. Please contact hygienistwestmeath@gmail.com.

Hygienist required for Fridays for busy Co. Mayo practice. Immediate start. Send CV and cover letter to reception@drrosemarysmith.com.

Full-time receptionist. Experience essential. Join a growing dynamic specialist practice. Excellent computer skills and customer care focused. Positive, adaptable, good at working in a fast-paced environment. Available to work early mornings/late evenings and occasional Saturdays. Email: shona@clontarfbraces.ie.

PRACTICES FOR SALE/TO LET

Premises available to rent at Clareabbey Primary HC, Clarecastle, Ennis, Co. Clare, first-floor unit, opportunity for dentist interested in starting practice. Layout can be tailored. GP practice, allied health professionals, pharmacy and consultant's clinic on site. Tel: 065-684 0020, Email: manager@caphc.ie, or log on to www.caphc.ie.

Co. Longford. Practice for sale. Well established two-surgery practice with OPG unit for sale. Well maintained practice in large town. Owner retiring. Email in strictest confidence to info@medaccount.ie.

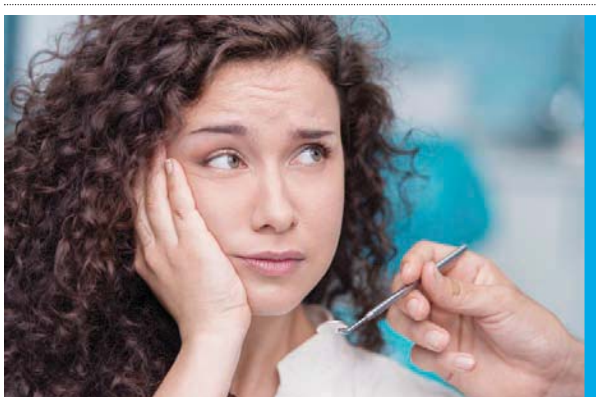
For sale – Dublin 9. Long-established practice with residential accommodation. Three fully equipped modern surgeries, OPG, office, waiting room, tea room. Private only. Full planning permission. Excellent decorative order. Good location. Potential for expansion. Parking at rear. Replies to Box No. 1058.

For sale – Midlands. Long-standing, progressive practice, 90 minutes from Dublin. Three surgeries. Modern equipment. Hygienist. Part-time. Potential to increase hours, remuneration. Low medical card. Immediate sale/transfer of goodwill. Principal retiring. All flexible options considered. Contact: niall@innovativedental.com or 086 807 5273.

Practice for sale, Wicklow. Expense-sharing, private, long-established dental practice. Owner retiring. Three modern, fully equipped surgeries. Hygienist. Visiting implantologist and periodontist, good support staff. Freehold/leasehold. Email: Oswald@oswaldbrowne.plus.com.

EQUIPMENT FOR SALE

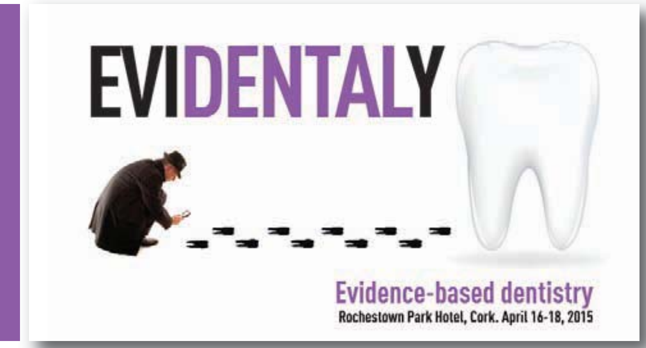
Equipment for sale – Dublin. For sale as one job lot – equipment – two full surgeries. Belmont chairs, compressor, suction motors, licensed intra-oral x-rays. Good secondary items. Photos available. Reasonable offer secures. Can be viewed in operation. Available April. Email: niall@innovativedental.com.



Got a complaint that's difficult to deal with?

dentalcomplaints.ie

APRIL



16-18 Rochestown Park Hotel, Cork
IDA Annual Scientific Conference 2015

28 Strand Hotel, Limerick
IDA MEMBERS ONLY
North Munster Branch IDA – Meeting and AGM
Speaker: Dr Aiden O'Brien, on 'Snoring and sleep apnoea: diagnosis, management and relevance to general practice'. Branch AGM will take place after the lecture.

MAY

14 Louis Fitzgerald Hotel, Dublin
Irish Society of Dentistry for Children – Get Ready – dental and medical emergencies in children

15 Maryborough House Hotel, Cork
Hands-on course on snoring and sleep apnoea (details below)

16 Radisson Blu Hotel, Golden Lane, Dublin 8
Irish Dental Nurses Association – Summer Scientific Conference and Annual General Meeting

JUNE

3-6 Excel, London
Europerio 8
www.efp.org.

18-19 Ormonde Hotel, Kilkenny
ISDH Annual Conference: Understanding the patient's perspective
Stepladder to success in Special Care Dentistry. For further details log on to www.isdh.ie.

SEPTEMBER

18-19 City West Hotel, Dublin
Identex 2015

22-55 Bangkok Thailand
FDI 2015 Bangkok
For information, contact www.fdi2015bangkok.org.

NOVEMBER

6-7 Gibson Hotel, Dublin City Centre
Irish Dental Hygienists Association Annual Winter Scientific Conference 2015
Further details available on www.idha.ie.

Snoring and the role of the GDP

Maryborough House Hotel, Cork
Friday May 15, 2015, 9.30am – 5.30pm
Dr Roy Dookun
BDS, MFGDP(UK), MGDSRCS(ENG), FFGDP(UK), DIP DENT SED

- An overview of sleep disordered breathing with special reference to the association between obstructive sleep apnoea and snoring
- An explanation of how oral appliances work
- How to safely assess and monitor patients
- An overview of custom and non custom devices
- Dental Protection Ltd and DDU approved pre treatment screening and how to select those patients it is safe to treat in practice
- An overview of the medico-legal issues involved
- Surgery and laboratory requirements and procedures
- Practical advice on introducing a dental sleep medicine service into your practice
- Appliance evaluation
- Hands-on experience practising protrusive registration, fitting a selection of custom MRDs together with an appliance evaluation group discussion

Roy is a GDP with a special interest in the dental management of snoring and obstructive sleep apnoea. He is the president and co founder of the British Society of Dental Sleep Medicine (BSDSM), a board member of the European Academy of Sleep Medicine (EADSM) and is co-author of the BSDSM Snoring Pre treatment Screening Protocol. Roy works as part of a multi-disciplinary team treating both apnoeic patients and simple snorers with dental appliances. He has attained 'expert' level EADSM accreditation and is the author of the Standards of Care Document for Mandibular Repositioning Devices (MRDs), which has been adopted by the Association for Respiratory Technology and Physiology. Roy is a member of the Multidisciplinary Advisory Council and Core Teaching Faculty of the Australasian Academy of Dental Sleep Medicine. Roy works in Guernsey and Wimpole Street, London.

Dental Insurance from the Dental Experts

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At DeCare Dental, we have been processing member claims in Ireland since 2004 and our priority is to make this process as fast and simple for our members as possible, while ensuring the security of their information.

We are now offering two flexible claiming options:

Option 1: Direct Pay

- DeCare now offers a direct pay facility with participating dental practices.
- DeCare pays the dentist directly for the costs covered by the member's policy, meaning they have less out-of-pocket expense.
- Where this service is available, it is operated using advanced technology ensuring secure transmission of patient information.

Option 2: Pay and Claim

- Members can also attend any dentist listed on our Dental Directory, pay the dentist as normal and then claim back the costs covered by their policy.
- Claims are processed within ten working days and members can be assured of accurate claims assessment thanks to DeCare's expertise in this area.

Check your details on our Dental Directory

DeCare Dental's Dental Directory is an online directory listing dentists throughout Ireland that are happy to provide our members with the relevant information they need for their claim form.

Queries?

Contact: Regina Brady

☎ 094 9372277 ✉ rbrady@decare.com

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The robust NovaMin® layer binds firmly to collagen in dentine[3,6], and resists daily physical and chemical oral challenges,[1,3,5,7,8] **helping to protect against the future pain of dentine hypersensitivity.**

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References: 1. Burwell A et al. J Clin Dent 2010; 21 (Spec Iss): 66-71. **2.** LaTorre G, Greenspan DC. J Clin Dent 2010; 21 (Spec Iss): 72-76. **3.** West NX et al. J Clin Dent 2011; 22 (Spec Iss): 82-89. **4.** Earl JS et al. J Clin Dent 2011; 22 (Spec Iss): 62-67. **5.** Earl JS et al. J Clin Dent 2011; 22 (Spec Iss): 68-73. **6.** Efflandt SE et al. J Mater Sci: Mater Med 2002; 13 (6): 557-565. **7.** Parkinson CR & Willson RJ. J Clin Dent 2011; 22 (Spec Iss): 74-81. **8.** Wang Z et al. S Dent 2010; 38: 400-410.

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