ISSUE
53
MAR15

The Dental Probe

The Maltese Dental Journal

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Think beyond pain relief and recommend Sensodyne Repair & Protect

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References: **1.** Greenspan DC. J Clin Dent 2010; 21(Spec Iss): 61–65. **2.** LaTorre G, Greenspan DC. J Clin Dent 2010; 21(3): 72-76. **3.** Burwell A *et al*. J Clin Dent 2010; 21(Spec Iss): 66–71. **4.** West NX *et al.* J Clin Dent 2011; 22(Spec Iss): 82-89. **5.** Earl J *et al.* J Clin Dent 2011; 22(Spec Iss): 62-67. **6.** Efflandt SE *et al*. J Mater Sci Mater Med 2002; 13(6): 557-565. **7.** Zhong JP *et al*. The kinetics of bioactive ceramics part VII: Binding of collagen to hydroxyapatite and bioactive glass. In Bioceramics 7, (eds) OH Andersson, R-P Happonen, A Yli-Urpo, Butterworth-Heinemann, London, pp61–66. **8.** Parkinson C *et al.* J Clin Dent 2011; 22(Spec Issue): 74-81. **9.** Earl J *et al.* J Clin Dent 2011; 22(Spec Iss): 68-73. **10.** Wang Z *et al*. J Dent 2010; 38: 400–410.

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DENTAL ASSOCIATION OF MALTA
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Editorial

By Dr David Muscat

Dear colleagues,

We have had the committee elections on the 4th February and this year we elected 9 members and co-opted one member. The list is as follows:

Dr David Muscat
President, PRO, Editor 'The Dental Probe'
Dr Adam Bartolo
Vice President, Government Relations Officer
Dr Noel Manche
Treasurer
Dr David Vella
Secretary
Dr Lino Said
Events co-ordinator
Dr Nik Dougall
IT Officer
Dr Chris Satariano
Federation Representative
Dr Gabrielle Cordina
Projects Officer
Dr Ann Meli Attard
CPD Officer
Dr Audrey Camilleri (co-opted)
International Relations Officer, Representative on Federation.

We have an eclectic mix of talent and a keen team. We welcome Dr Audrey Camilleri back on our committee as well as the new members Drs Ann Meli Attard, Gabrielle Cordina and Chris Satariano.

We would like to thank Drs John Vella Bardon, Darien Cini and Roberto Cutajar for their work in the last committee.

Next year CPD becomes mandatory so I recommend that all dentists become fully fledged DAM members. We provide certification for all our scientific /educational lectures/events.

Our next events are listed below. We are constantly working towards providing new lectures and courses.

I have been informed by a local dentist who was suffering with a severe work related ailment that there are special masks available for added protection from inhalants and aerosols. These are masks with valves (Aura)-3M1883 item FFP3N.

The cover picture was kindly provided by Dr Etienne Cassar.

To contact the editor please use the following e mail address editor@dam.com.mt.

Best regards,

David

Dr David Muscat B.D.S. (LON)
Editor / President, P.R.O.,
I.R.O. D.A.M.

PLANNED EVENTS

21 MAY
Lecture by Dr Stefan Abela Consultant Orthodontist 'Successful Orthodontics – Predicting long Term stable Outcomes' sponsored by Mepha at the Yacht Club followed by dinner.

11 SEPTEMBER
Full Day Hands On course on Tooth Wear in September by Professor Millar from Kings. Venue and sponsor to be announced.

ST APOLLONIA QUIZ 2015

1. In which city did St. Apollonia die?
2. In which Cathedral in Portugal may one find a reliquary containing the tooth of Saint Apollonia?
3. In which city do you find 'Piazza Sant Apollonia?'
4. In which city is a principal train station named after St. Apollonia?
5. Which Island in the Indian Ocean was originally named St. Apollonia by Portugese Navigators in 1507? (and then subsequently renamed?)
6. In which church in Malta can one find a painting of S Apollonia?
7. What date is St Apollonia celebrated in the yearly calendar?

Professor George Camilleri presenting the Photoalbum of St Apollonia events since 1947 to the present day to Dr David Muscat President DAM for safekeeping on Sunday 8 February 2015 at Palazzo Preca Valletta at the 2015 St Apollonia lunch .

***Answers:* 1.** *Cairo, Egypt;* **2.** *Reliquaries found in many cities- Cologne, Trastevere in Rome ,Brussels, Jesuit church in Antwerp, Porto;* **3.** *Rome;* **4.** *Mauritius;* **5.** *Lisbon;* **6.** *San Gaetan Hamrun;* **7.** *9th February*

The first prize was won by Father Mark Sultana, the second prize by Professor George Camilleri and the third prize Dr Walter Debono.

Advertisers are responsible for the claims they make in their ads and the opinion of the advertisers and editors of articles in the issue are not necessarily the opinion of the DAM.

Brufen Tablets 400mg
1200 - 1800mg daily in divided doses, up to a maximum of 2400mg

Brufen Granules 600mg
1200 - 1800mg daily in divided doses, up to a maximum of 2400mg

Brufen Retard 800mg
2 tablets taken as a single dose preferably in the early evening well before retiring to bed

Brufen Syrup: The daily dose of Brufen 20mg/Kg of bodyweight in divided doses
1 - 2 yrs: One 2.5ml spoonful (50mg) three to four times a day
3 - 7 yrs: One 5ml spoonful (100mg) three to four times a day
8 -12 yrs: Two 5ml spoonfuls (200mg) three to four times a day

Brufen Tablets 400mg , Brufen Granules 600mg, Brufen Retard Tablets 800mg, Brufen Syrup 500ml (100mg/5ml) Therapeutic indications: Brufen is indicated for its analgesic and anti-inflammatory effects in the treatment of rheumatoid arthritis (including juvenile rheumatoid arthritis or Still's disease), ankylosing spondylitis, osteoarthritis and other non-rheumatoid (seronegative) arthropathies.In the treatment of non-articular rheumatic conditions, Brufen is indicated in periarticular conditions such as frozen shoulder (capsulitis), bursitis, tendonitis, tenosynovitis and low back pain; Brufen can also be used in soft tissue injuries such as sprains and strains. Brufen is also indicated for its analgesic effect in the relief of mild to moderate pain such as dysmenorrhoea, dental and post-operative pain and for symptomatic relief of headache, including migraine headache.**Posology and method of administration:** Adults: The recommended dosage of Brufen is 1200-1800 mg daily in divided doses. Some patients can be maintained on 600-1200 mg daily. In severe or acute conditions, it can be advantageous to increase the dosage until the acute phase is brought under control, provided that the total daily dose does not exceed 2400 mg in divided doses. Children: The daily dosage of Brufen is 20 mg/kg of body weight in divided doses. In Juvenile Rheumatoid Arthritis, up to 40 mg/kg of body weight daily in divided doses may be taken. Not recommended for children weighing less than 7 kg. Elderly: The elderly are at increased risk of serious consequences of adverse reactions. If an NSAID is considered necessary, the lowest effective dose should be used and for the shortest possible duration. The patient should be monitored regularly for GI bleeding during NSAID therapy. If renal or hepatic function is impaired, dosage should be assessed individually. For oral administration. To be taken preferably with or after food, with a glass of water. Brufen tablets should be swallowed whole and not chewed, broken, crushed or sucked on to avoid oral discomfort and throat irritation. A transient sensation of burning in the mouth or throat may occur with Brufen Syrup and Brufen Granules; ensure the syrup is thoroughly shaken before use and the granules are dissolved in plenty of water. **Contraindications:** Brufen is contraindicated in patients with hypersensitivity to the active substance or to any of the excipients. Brufen should not be used in patients who have previously shown hypersensitivity reactions (e.g. asthma, urticaria, angioedema or rhinitis) after taking ibuprofen, aspirin or other NSAIDs. Brufen is also contraindicated in patients with a history of gastrointestinal bleeding or perforation, related to previous NSAID therapy. Brufen should not be used in patients with active, or history of, recurrent peptic ulcer or gastrointestinal haemorrhage (two or more distinct episodes of proven ulceration or bleeding). Brufen should not be given to patients with conditions involving an increased tendency to bleeding. Brufen is contraindicated in patients with severe heart failure, hepatic failure and renal failure. Brufen is contraindicated during the last trimester of pregnancy. **Special warnings and precautions for use:** Undesirable effects may be minimised by using the lowest effective dose for the shortest duration necessary to control symptoms. Patients with rare hereditary problems of galactose intolerance, the Lapp lactose deficiency or glucose-galactose malabsorption should not take this medication. As with other NSAIDs, ibuprofen may mask the signs of infection. The use of Brufen with concomitant NSAIDs, including cyclooxygenase-2 selective inhibitors, should be avoided due to the increased risk of ulceration or bleeding. Elderly: The elderly have an increased frequency of adverse reactions to NSAIDs, especially gastrointestinal bleeding and perforation, which may be fatal. Paediatric population: There is a risk of renal impairment in dehydrated children and adolescents. Gastrointestinal bleeding, ulceration and perforation: GI bleeding, ulceration or perforation, which can be fatal, has been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of serious GI events. The risk of GI bleeding, ulceration or perforation is higher with increasing NSAID doses, in patients with a history of ulcer, particularly if complicated with haemorrhage or perforation, and in the elderly. These patients should commence treatment on the lowest dose available. Combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors) should be considered for these patients, and also for patients requiring concomitant low dose aspirin, or other drugs likely to increase gastrointestinal risk. Patients with a history of gastrointestinal disease, particularly when elderly, should report any unusual abdominal symptoms (especially gastrointestinal bleeding) particularly in the initial stages of treatment. Caution should be advised in patients receiving concomitant medications which could increase the risk of ulceration or bleeding, such as oral corticosteroids, anticoagulants such as warfarin, selective serotonin-reuptake inhibitors or anti-platelet agents such as aspirin. When GI bleeding or ulceration occurs in patients receiving Brufen, the treatment should be withdrawn. NSAIDs should be given with care to patients with a history of ulcerative colitis or Crohn's disease as these conditions may be exacerbated. Respiratory disorders: Caution is required if Brufen is administered to patients suffering from, or with a previous history of, bronchial asthma since NSAIDs have been reported to precipitate bronchospasm in such patients. Cardiovascular, renal and hepatic impairment: The administration of an NSAID may cause a dose dependent reduction in prostaglandin formation and precipitate renal failure. Patients at greatest risk of this reaction are those with impaired renal function, cardiac impairment, liver dysfunction, those taking diuretics and the elderly. Renal function should be monitored in these patients. Brufen should be given with care to patients with a history of heart failure or hypertension since oedema has been reported in association with ibuprofen administration. Cardiovascular and cerebrovascular effects: Appropriate monitoring and advice are required for patients with a history of hypertension and/or mild to moderate congestive heart failure as fluid retention and oedema have been reported in association with NSAID therapy. Epidemiological data suggest that use of ibuprofen, particularly at a high dose (2400 mg/ daily) and in long term treatment, may be associated with a small increased risk of arterial thrombotic events such as myocardial infarction or stroke. Overall, epidemiological studies do not suggest that low dose ibuprofen (e.g. £ 1200mg daily) is associated with an increased risk of arterial thrombotic events, particularly myocardial infarction. Patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease should only be treated with ibuprofen after careful consideration. Similar consideration should be made before initiating longer-term treatment of patients with risk factors for cardiovascular events (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking). Renal effects: Caution should be used when initiating treatment with ibuprofen in patients with considerable dehydration. As with other NSAIDs, long-term administration of ibuprofen has resulted in renal papillary necrosis and other renal pathologic changes. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion. In these patients, administration of an NSAID may cause a dose-dependant reduction in prostaglandin formation and, secondarily, in renal blood flow, which may precipitate overt renal decompensation. Patients at greatest risk of this reaction are those with impaired renal function, heart failure, liver dysfunction, those taking diuretics and ACE inhibitors and the elderly. Discontinuation of NSAID therapy is usually followed by recovery to the pre-treatment state. SLE and mixed connective tissue disease: In patients with systemic lupus erythematosus (SLE) and mixed connective tissue disorders there may be an increased risk of aseptic meningitis. Dermatological effects: Serious skin reactions, some of them fatal, including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis, have been reported very rarely in association with the use of NSAIDs. Patients appear to be at highest risk of these reactions early in the course of therapy, the onset of the reaction occurring within the first month of treatment in the majority of cases. Brufen should be discontinued at the first appearance of skin rash, mucosal lesions, or any other sign of hypersensitivity. Haematological effects: Ibuprofen, like other NSAIDs, can interfere with platelet aggregation and has been shown to prolong bleeding time in normal subjects. Aseptic meningitis: Aseptic meningitis has been observed on rare occasions in patients on ibuprofen therapy. Although it is probably more likely to occur in patients with systemic lupus erythematosus and related connective tissue diseases, it has been reported in patients who do not have an underlying chronic disease. Impaired female fertility: The use of Brufen may impair female fertility and is not recommended in women attempting to conceive. In women who have difficulties conceiving or who are undergoing investigation of infertility, withdrawal of Brufen should be considered.**Undesirable effects:** Gastrointestinal disorders: The most commonly observed adverse events are gastrointestinal in nature. Peptic ulcers, perforation or GI bleeding, sometimes fatal, particularly in the elderly, may occur. Nausea, vomiting, diarrhoea, flatulence, constipation, dyspepsia, abdominal pain, melaena, haematemesis, ulcerative stomatitis, exacerbation of colitis and Crohn's disease have been reported following ibuprofen administration. Less frequently, gastritis has been observed. Gastrointestinal perforation has been rarely reported with ibuprofen use. Pancreatitis has also been reported very rarely. A transient sensation of burning in the mouth or throat may occur with Brufen Syrup and Brufen Granules. Immune system disorders: Hypersensitivity reactions have been reported following treatment with NSAIDs. These may consist of (a) non-specific allergic reaction and anaphylaxis, (b) respiratory tract reactivity comprising asthma, aggravated asthma, bronchospasm or dyspnoea, or (c) assorted skin disorders, including rashes of various types, pruritus, urticaria, purpura, angioedema and, more rarely, exfoliative and bullous dermatoses (including Stevens-Johnson syndrome, toxic epidermal necrolysis and erythema multiforme). Cardiac disorders and vascular disorders: Oedema, hypertension and cardiac failure have been reported in association with NSAID treatment. Epidemiological data suggest that use of ibuprofen, particularly at high dose (2400 mg/ daily), and in long term treatment, may be associated with a small increased risk of arterial thrombotic events such as myocardial infarction or stroke. Other adverse events reported less commonly and for which causality has not necessarily been established include: Blood and lymphatic system disorders: Leukopenia, thrombocytopenia, neutropenia, agranulocytosis, aplastic anaemia and haemolytic anaemia Psychiatric disorders: Insomnia, anxiety, depression, confusional state, hallucination Nervous system disorders: Optic neuritis, headache, paraesthesia, dizziness, somnolence. Infections and infestations: Rhinitis and aseptic meningitis (especially in patients with existing autoimmune disorders, such as systemic lupus erythematosus and mixed connective tissue disease) with symptoms of stiff neck, headache, nausea, vomiting, fever or disorientation. Eye disorders: Visual impairment and toxic optic neuropathy. Ear and labyrinth disorders: Hearing impaired, tinnitus and vertigo. Hepatobiliary disorders: Abnormal liver function, hepatic failure, hepatitis and jaundice. Skin and subcutaneous tissue disorders: Bullous reactions, including Stevens-Johnson syndrome and toxic epidermal necrolysis (very rare), and photosensitivity reaction. Renal and urinary disorders: Impaired renal function and toxic nephropathy in various forms, including interstitial nephritis, nephrotic syndrome and renal failure. General disorders and administration site conditions: Malaise, fatigue.

Supply classification: POM.

Authorisation Holder: Abbott Healthcare Products Limited, Abbott House, Vanwall Business Park, Vanwall Road, Maidenhead, Berkshire SL6 4XE, UK.

Local representative of the Marketing Authorisation Holder: V.J. Salomone Pharma Ltd., Upper Cross Road, Marsa Tel.: +356 21220174.

Authorisation numbers: AA150/01402, AA150/01404-6. **Date of Revision of Text:** July 2014 **Date of Preparation:** August 2014

For further information about the product, please refer to the full summary of product characteristics.

Abbott
A Promise for Life

THE DENTAL ASSOCIATION OF MALTA

President's Administrative Report 2015

By Dr David Muscat

It has been quite a good year for the Dental Association of Malta. We have a great team.

We have organised lectures on Periodontal disease, heart disease, skin lesions of the lip, hearing loss in dentists, tooth wear, sinus lifts, implants, endocrine diseases in relation to dentistry and facial pain.

In 2014 we organised a St. Apollonia event in February at a chapel in B' Bugia followed by lunch at Ferretti as well as religious events and retreats .At Christmas time we had a dinner at Palazzo Depiro in Mdina where we also raised 455 euro for Equal Partners Foundation charity with our raffle. We would like to thank the sponsors who provided the raffle gifts namely And V Von Brockdorff, Bart Enterprises, Cherubino , Collis Williams, Vivian Commercial , Chemimart and Dr. Lino Said.

This year 2015 on Sunday 8Feb we celebrate mass at St Apollonia at Sagramentini Chapel in Merchants street Valletta followed by lunch at Palazzo Preca.

We have lectures lined up:
On February 18th-Dr.Edward Sammut 'First Cut Is the Deepest' lecture at Palazzo Castellini in Rabat with dinner sponsored by Menarini.

On February 26th-Dr Dan Keir -Endodontist from Alaska 'Resorptions' at Vinum sponsored by Chemimart..

On May 21st we have a lecture with Dr Stefan Abela, Consultant Orthodontist 'Successful Orthodontics- Predicting long Term stable Outcomes'.

On 11 September we have a full day hands on course on' Tooth Wear' with Professor Brian Millar from Kings sponsored by the DAM for paid up members.

We have organised excellent social events namely sailing, clay pigeon shooting and golf. In 2015 we hope to organise archery, kayaking and scuba diving for our members. The social events have brought out great camaraderie .Dr Lino Said and I as well as the whole committee are heavily involved in the organisation of each and every event. There is of course the time element where one has to take time off work to get all these things together and to fruition.

We are currently negotiating a new package with Bank of Valletta- Dr Lino Said is in charge of this. We have negotiated packages with Vodafone-and credit goes to Drs Adam Bartolo and Nik Dougall for this, and liased with Dental Indemnity Insurance companies-again Drs David Vella and Adam Bartolo were very valuable contributors to this as well as most of the committee, and a Trust company. Our finances are well taken care of by our treasurer Dr Noel Manche.Noel is also responsible for our very smart membership cards.

Drs Roberto Cutajar and Darien Cini have represented us at the Federation. Dr David Vella has fitted into the role of secretary with great ease and dedication. Dr John Vella Bardon has taken care of the CPD certification. We will provide certification for every lecture and course to our paid up members.

We currently provide several hours of CPD with certification so we are already in line for 2016 when it is envisaged that CPD will become mandatory.

The Dental Association is currently liasing with a group of dentists who wish to set up a pilot voluntary Sunday morning dental emergency rota.

The Dental Association is also aiming to provide several CPD courses in Malta.

We are in touch with the Council of European dentists and the ERO at EU level and the FDI at Global level .We have involved ourselves in issues such as data protection, antimicrobial resistance and antibiotics, online evaluations of dentists, European Oral Health day, Diabetes, Vocational Training, CPD, radiation directive, amalgam alternatives, nanomaterials, the ADEE, e learning, issues with dental hygienists, blood taking, nitrous oxide and sedation and several other issues .Dental Association of Malta news is also occasionally featured on the electronic newsletter of the CED.

The Dental Probe Journal is now past its tenth year with me as editor and I feel that it is quite representative of what we stand for. The Dental Probe is also posted to overseas dentists and the pdf is sent worldwide. Every lecture we organised has the pdf printed so that those members who could not attend the event can still see the slides or read the article written about it. I try to attend every postgraduate event in Malta and summarise the salient points.

We mourn the loss of Dr Tony Fiorini who passed away in December 2014 and Mrs Helen Galea Bonavia(wife of Dr Carmel Galea Bonavia) who passed away this January.

Besides being involved in organising CPD, promoting the progress of dentistry; maintaining the honour and safeguarding the interests of the dental profession; negotiating with the government; helping disseminate dental literature and promoting ethical conduct--The Dental Association will stand shoulder by shoulder by you both in good times as well as in hard times. If you have a problem or you need something - come to us and we will help you.

We look forward to another productive year with pride and energy.

Dr David Muscat
President

Non-stick effect for efficient contouring

Ivoclar Vivadent has developed the innovative modelling instrument OptraSculpt® Pad in order to meet the demand for efficient processing of highly-esthetic composites.

Despite the excellent mechanical properties of composite materials, their contouring remains a very demanding task for dentists even today. Highly esthetic composites, in particular, sometimes demonstrate a very adhesive consistency due to their filler composition, and they are thus more difficult to shape.

OptraSculpt® Pad is a contouring instrument with special foam pad attachments, which is designed for the efficient, non-stick forming and shaping of composites. It is especially suitable for the contouring of class III, IV and V restorations as well as of direct veneers.

Suitable for dental technicians:

OptraSculpt Pad is also optimally suitable for applying and modelling lab composites. Therefore, the efficient processing of composites is equally supported in dental labs.

Non-stick shaping and contouring
The non-stick attachments of OptraSculpt Pad enable composite materials to be shaped and contoured with ease, without leaving any unwanted marks. Thus, composite restorations with smooth and even surfaces are fabricated with utmost efficiency.

Shaping and contouring with OptraSculpt Pad

Shaping and contouring with a metal spatula

Smooth and even surfaces
Due to the special material of the pads, natural-looking restorations are easily accomplished in only a few steps. The highly flexible synthetic foam pads optimally adjust to the anatomical contours and allow smooth modelling.

Result achieved with OptraSculpt Pad

Result achieved with a metal

Professional esthetic results
The reference scales on the instrument handle assist in the creation of esthetic and anatomically-correct restorations. The markings allow the clinical situation to be compared with the ideal average tooth width proportions and angular alignments in the upper anterior dentition.

Reference scale 1

Reference scale 2

For further information, please visit www.ivoclarvivadent.com

NEW LUTING COMPOSITE: VARIOLINK ESTHETIC

Variolink Esthetic, the light- and dual-curing luting composite, allows the dental professional to adhesively cement highly esthetic ceramic and composite restorations thanks to its flexible and well-structured Effect shade concept. Pre-polymerized excess material can be easily and efficiently removed.

Cementation materials establish a durable bond between the tooth structure and the restorative material, and therefore contribute significantly to the long-term success of indirect restorations. Cementation materials are classified into three different types: conventional cements, self-adhesive composite cements and adhesive luting composites.

The advantage of conventional cements (e.g. phosphate or glass ionomer cements) lies in the easy and time-saving removal of excess material, which adheres mechanically to the tooth structure and is easily discernible due to its opaque shade. However, for conventional cements to establish a mechanical bond, retentive preparation is required.

The advent of adhesive luting composites has contributed to the rising importance of innovative restorative materials which allow for a defect-oriented preparation. Their adhesive bond makes it possible that highly esthetic all-ceramics – such as IPS e.max Press/CAD – can be used even if no retentive preparation has been performed.

It is essential in such cases, however, that a luting material of an appropriate shade and translucency level is selected in order to obtain excellent esthetic results. This applies in particular to restorations with a low material thickness. An additional advantage of adhesive luting composites over conventional cements represents the enhanced long-term integrity of the restoration margin. The low solubility and high resistance to wear of these luting composites lead to a reduced washing out of the cement gap. Adhesive luting composites use a dentin adhesive to ensure a reliable bond to the tooth structure. The adhesive penetrates into the dentin tubuli and forms a hybrid layer by bonding to collagen fibres. Etching of the tooth structure removes the smear layer and exposes the dentin tubuli, resulting in an increased micro-retention.

The luting composite forms a chemical bond with the hybrid layer and therefore adheres well to dentin and enamel. Although the pre-treatment time of well-established self-adhesive composite cements is considerably reduced as no conditioning is required, they demonstrate lower bond strength values.

OPTIMUM ESTHETICS FOR A BROAD RANGE OF INDICATIONS

Variolink Esthetic is a light- und dual-curing luting composite for the permanent cementation of ceramic and composite restorations. The light-curing version (Variolink Esthetic LC) is suitable for translucent restorations for which a longer working time is desired.

This allows the dental professional to position, secure and subsequently light-cure all-ceramic veneers without any time constraints. The dual-curing version (Variolink Esthetic DC) is suitable for ceramic and composite restorations for which a complete polymerization with light cannot be ensured due to the material's opacity or strong wall thickness.

In such cases, complete polymerization of the luting composite is achieved by the material's combination of light- and self-curing properties, resulting in a reliable adhesion of the restoration. Variolink Esthetic is available in five different shades, which allow the dental professional to influence the brightness value of the final restoration. Variolink Esthetic Neutral, which features the highest level of translucency, does

Continues on page 8.

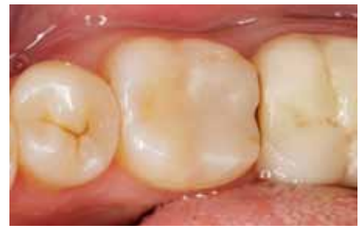


Fig. 1 Preoperative situation: Tooth 36 with an insufficient composite filling

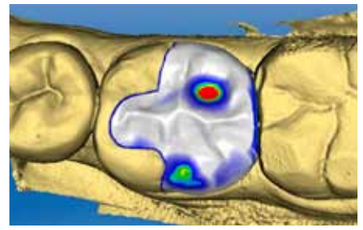


Fig. 2 CAD construction of the e.max CAD restoration

Fig. 3 Try-in of the crystallized and characterized restoration with Variolink Esthetic Try-In Paste Neutral

Fig. 4 Preparation after placement of the anatomically shaped OptraDam rubber dam

Fig 5 Etching of the prepared tooth surface with 37% phosphoric acid etching gel (Total Etch)

NEW LUTING COMPOSITE: VARIOLINK ESTHETIC

Continues from page 7.

not affect the brightness value of the restoration and is colour neutral. "Warm" and "Warm+" increase the chroma of the restoration and therefore lend the restoration a darker appearance. The shades "Light" and "Light+" have a brightening effect on the restoration.

EASY EXCESS REMOVAL

In the past, the time-consuming removal of excess material before and after polymerization represented a disadvantage of the adhesive cementation technique. Variolink Esthetic has been further developed and sets now a new benchmark in this respect. Excess material can be easily removed while still in a gel-like consistency due to the material's optional pre-polymerization feature. For the pre-polymerization, Variolink Esthetic DC is light-cured using the quarter technique, i.e. each quarter surface (mesio-oral, disto-oral, mesio-buccal, disto-buccal) is polymerized with light for two seconds. In case of Variolink Esthetic LC, the entire cement gap is pre-polymerized within two seconds (circular technique).

FLEXIBLE CONSISTENCY

The consistency of Variolink Esthetic has been optimally adapted to the requirements in dental practices. It has a convenient level of flowability and can be effortlessly and precisely extruded from the syringe. Furthermore, excess material smoothly flows from the cement gap, but remains stable at the cementation joint so that it can be readily removed after successful pre-polymerization.

COMBINATION WITH ADHESE UNIVERSAL

The adhesive material Adhese Universal ideally complements Variolink Esthetic. The optional etching step with phosphoric acid is part of the "selective-etch" and the "etch & rinse" technique and results in an enhanced adhesion to enamel and optimized marginal seal. Adhese Universal is applied onto the tooth surface to be treated, starting with the enamel margins, and agitated for at least 20 seconds. Subsequently, the adhesive is dispersed with oil- and water-free air until a glossy, stable film results. Due to the adhesive's adapted thixotropy, the film thickness is kept to a minimum so that the fit of the restoration is not affected. The material is polymerized with a light intensity of ≥ 500 mW/cm2 for ten seconds before the placement of the indirect restoration.

CLINICAL CASE:

A 25-year-old patient presented to our practice with an insufficient composite filling and secondary caries on tooth 36 (Fig. 1). Since the defective area was very large, treatment with an IPS e.max CAD restoration was decided in order to achieve an efficient and esthetic result. After placement of the core build-up and preparation of the tooth, the tooth was scanned intraorally and a partial crown was designed (Fig. 2). Subsequently, the non-crystallized restoration was ground and tried in to check the contact points and the fit. In order to assess the esthetic appearance and the shade effect, the characterized and fired restoration was again tried in using Variolink Esthetic Try-In Paste Neutral (Fig. 3).

During these trial placements, care was taken that the tooth was sufficiently moist to ensure a lifelike shade impression. An anatomically shaped rubber dam (OptraDam Plus) was used for absolute isolation during the final placement of the restoration (Fig. 4). First, the enamel was etched for 15 seconds (Fig. 5), followed by the entire cavity for another 15 seconds (Fig. 5). Then, Adhese Universal was applied onto the prepared tooth surface and dispersed with a stream of air (Fig. 6). Special care was taken that no material pools formed at the cavity floor. Subsequently, the restoration was light-cured with a polymerization light (Bluephase Style) for 10 seconds.

To obtain an optimum bond, the IPS e.max CAD restoration was etched with hydrofluoric acid (IPS Ceramic Etch Gel) for 20 seconds and conditioned with Monobond Plus. In a next step, Variolink Esthetic DC was applied on the restoration which was subsequently positioned on the tooth. After pre-polymerization of the excess material using the quarter technique (two seconds per quarter surface) (Fig. 7), the gel-like excess material could be easily removed using a scaler (Fig. 8). Glycerine gel (Liquid Strip) was applied to prevent the formation of an inhibition layer. In a final step, each segment of the restoration was light-cured for 10 seconds (Fig. 9), the composite gap was finished and polished (Astropol) and the occlusion was checked.

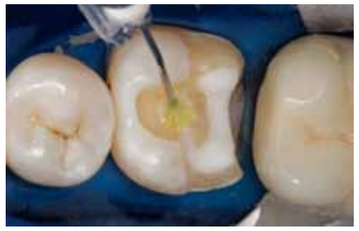


Fig. 6 Application of Adhese Universal in the VivaPen

Fig. 7 Excess material is pre-polymerized using the quarter technique, i.e. each quarter surface is light-cured for 2 seconds with the polymerization light held at a max. distance of 10 mm

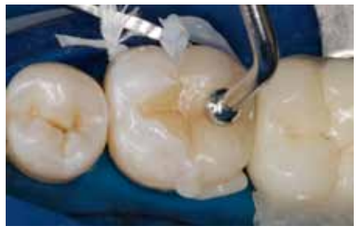


Fig. 8 The gel-like excess material is easily removed using a scaler.

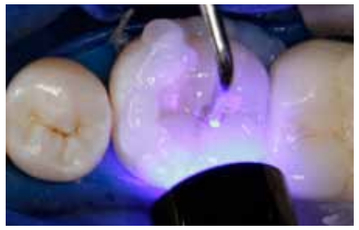


Fig. 9 After the application of a glycerine gel (Liquid Strip), each segment of the restoration is light-cured.

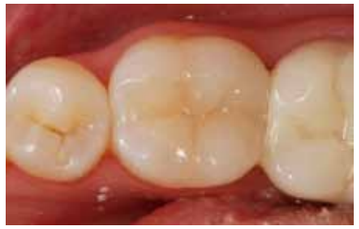
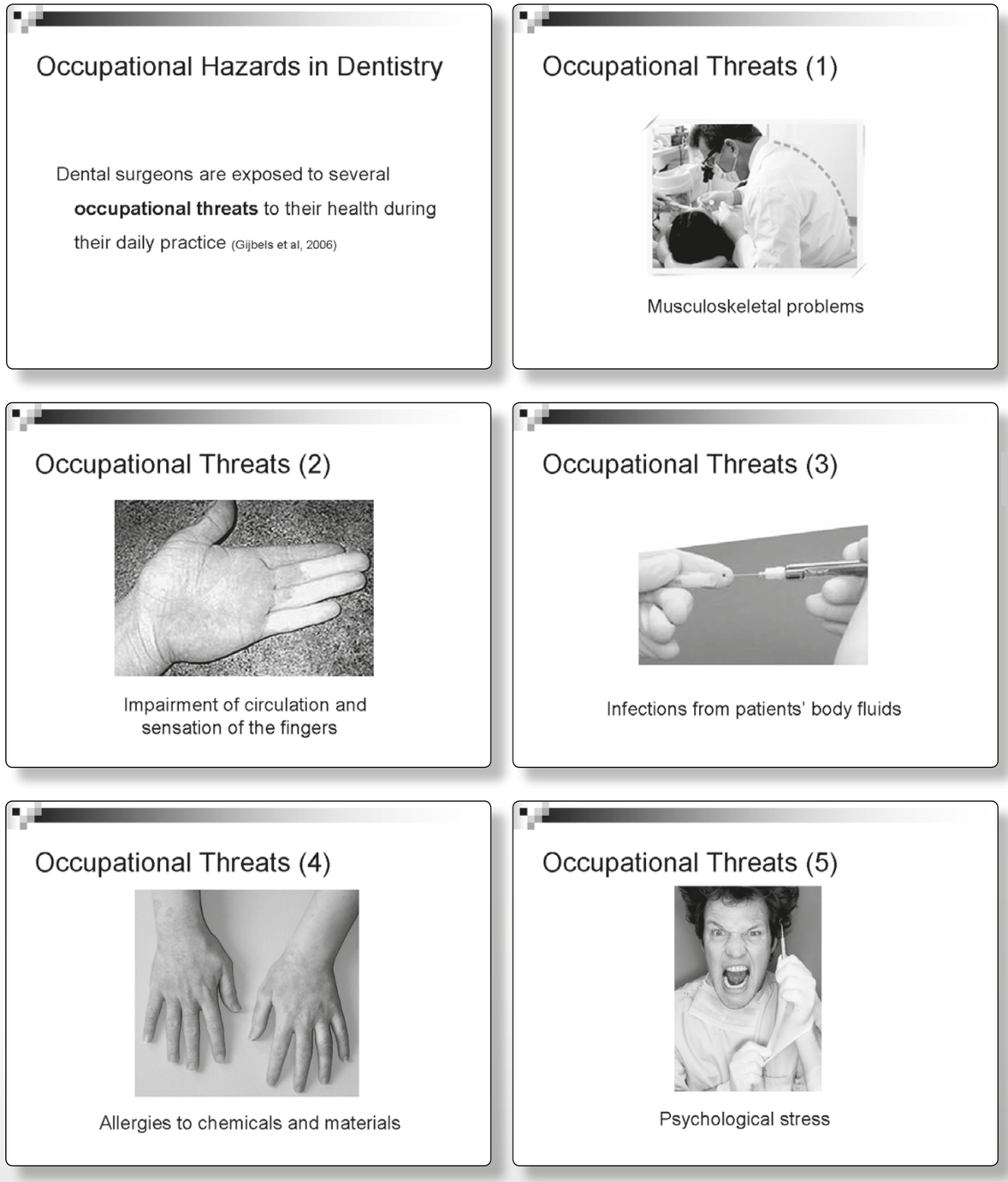


Fig. 10 Final situation one week after the successful placement of the restoration

NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Amanda Bartolo MD, MRCSEd, DO-HNSEd, FEBORL-HNS



Continues on page 10.

NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Continues from page 9.

Occupational Threats (6)

Visual impairment

Occupational Threats (7)

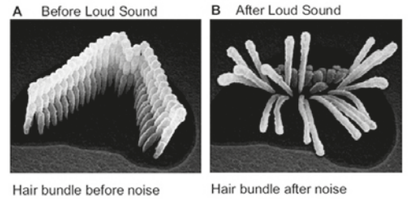
Auditory impairment

Mechanism of Hearing

How We Hear – *Grow Smart Foundation*

https://www.youtube.com/watch?v=09D3uDoERiY

Noise-Induced Hearing Loss (NIHL)



Initially changes are reversible as hair cells recover, but damage will become permanent with repeated exposure.

Noise Exposure

Drills & scalers

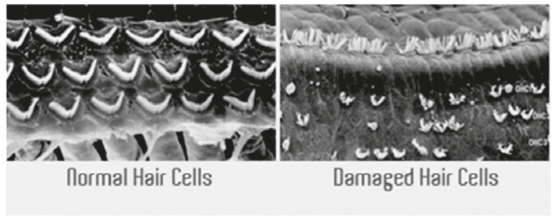
Autoclave

Noise Exposure

Background music

Air conditioner

Noise-Induced Hearing Loss (NIHL)



Noise-Induced Hearing Loss (NIHL)

- Noise damages cochlear hair cells (Azizi, 2010)
- **Occupational** noise commonest cause of NIHL in adults (Azizi, 2010)

Noise Exposure

Waiting room

Busy street

Traffic

Noise Exposure - Leisure

Occupational NIHL

- Occupational NIHL is defined as
  - *"hearing loss that develops slowly over a long period of time (several years) as the result of exposure to continuous or intermittent loud noise."* (ACOEM, 2003)

Occupational NIHL in Dentists

- Hearing loss more common in dentists than in the general population (Messano & Petti, 2012)
- Positive correlation between NIHL and years of service as a dentist (Goncalves et al, 2012; Reitemeier et al, 1990)

Continues on page 12.

NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Continues from page 11.

Effects of NIHL in Dentists

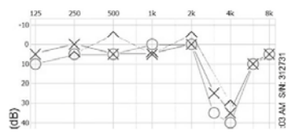
- failure to hear alarms of equipment
- impaired communication
  - errors when consenting patients
- tinnitus
- social isolation
- stress
- reduced quality of life

The Literature

- Several occupational threats in dentistry have been described, amongst which auditory disturbances (Ayatollahi et al, 2011; Gijbels et al, 2006; Pandis et al, 2007)
  - 19.6% (n=100) (Messano & Petti, 2012)
  - 21% (n=177) (Elmehdi, 2013)
- Dentists admit to being annoyed by noise in the clinic
  - 60% (n=108) (Lopes et al, 2012)
  - 70% (n=333), M:F = 1:3 (Khan et al, 2014)

Occupational NIHL - Characteristics

- Occupational NIHL is usually
  - Sensorineural
  - Bilateral
  - Symmetrical
  - Occurs first at 3kHz, 4kHz, and 6kHz giving a typical 'notch' on the audiogram (ACOEM, 2003)



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Continues on page 14.

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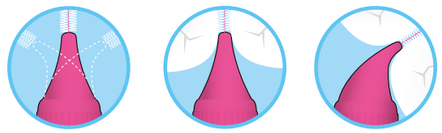

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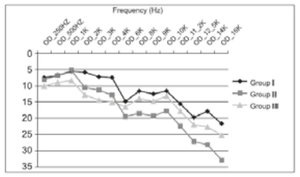
NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Continues from page 12.

Occupational NIHL - Characteristics

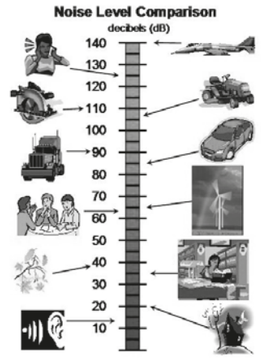
- Affected frequencies
  - Ultra high frequencies affected before (Gijbels et al, 2006; Lopes & Godoy, 2006; Lopes et al, 2012; Santos, 2011)



Hearing thresholds of dentists' right ear (Lopes et al, 2012)

Occupational Noise Exposure

- Risk of NIHL increases significantly with chronic exposures above **85dBA** for an **8-hour** time-weighted average (ACOEM, 2003)
- EU daily exposure limit value set to **87dBA** (Directive 2003/10/EC, 2003)



The Literature

Study	Year	Noise Levels (dBA)
Dutta et al	2013	63 - 81.5
Elmehdi	2013	65 (background) 72 - 87
Lourenco et al	2011	56.4 - 67.1 (background) 60.7 – 83.1
Kadankuppe et al	2011	64 - 97

Recommendations

- Recommendations to reduce occupational NIHL in dentists (Elmehdi, 2013; Szymanska, 2000)

Equipment

- Located outside clinic
- Sound-insulating material
- Regular maintenance & lubrication
- Switched on only when ready to use

Dentist

- Suitable distance from operating field
- Ear plugs
- Regular audiometric testing

Aims and Objectives

- to investigate **hearing loss** among dental surgeons registered and practising in Malta
  - especially occupational NIHL
  - other factors associated with hearing loss
  - perceptions re hearing impairment and noise levels
- to measure **noise levels** in dental clinics
  - especially noise produced by dental equipment
  - investigate whether noise levels exceed levels allowed by the European Agency for Safety and Health at Work.

Continues on page 16.

NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Continues from page 14.

Study Population

- Study population = dental surgeons registered and **practising** in Malta
  - Male & female
  - In public & private sectors
  - No age limit has been set as long as the dental surgeon is still actively practising

Research Instruments

Research instruments:

- Questionnaire
- Hearing test
- Sound level recording

The Questionnaire

- Self-designed
- Piloted on final year dental students
- 6 sections
  - General & demographic data
  - Non-occupational sources of hearing loss
  - Subjective perception of hearing impairment
  - Dental clinic & equipment information
  - Hearing protection
  - Contact information (optional)
  - Simple, structured, pre-coded
- Completed in ≤ 5 minutes

Hearing Test - Audiogram

- Establishes softest sounds that a person can hear
- Subject wears headphones
- Presented with a series of beeps at different frequencies and loudness levels
- Subject presses response button when sound is heard
- Thresholds obtained are plotted on an audiogram chart

Sound Level Testing

- Using a sound-level meter (dB)
- Standard protocol
- Background noise
- During instrument use

Continues on page 18.

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NOISE-INDUCES HEARING LOSS IN DENTAL SURGEONS

Continues from page 16.

Conclusion

- Better understanding of **local**
  - Occupational NIHL among dentists
  - Noise levels in local dental clinics
- Effects on
  - Dentist-patient communication
  - Dentists' well-being
- Correlations among other related variables
- Predictors of NIHL

Conclusion

- Increase awareness about NIHL among dentists
- Issue recommendations regarding
  - hearing protection
  - noise reduction
  - improvement of clinic acoustics

Possible Benefits

- Possible benefits:
  - knowledge of the subject's hearing level
  - possible diagnosis of a hearing loss → preventive measures + appropriate management
  - awareness of clinic noise levels → noise reduction + improvement of clinic acoustics

References (1)

American College of Occupational and Environmental Medicine. (2003). Noise-induced hearing loss. *Journal of Occupational and Environmental Medicine, 45*(6), 579-581. Retrieved from http://journals.lww.com/joem/fulltext/2003/06000/noise_induced_hearing_loss.1.aspx

Azizi, M.H., (2010). Occupation noise-induced hearing loss. *International Journal of Occupational and Environmental Medicine, 1*(3), 116-123. Retrieved from http://www.theijoem.com/ijoem/index.php/ijoem/article/viewfile/36/98

Bali, N., Acharya, S., & Anup, N. (2007). An assessment of the effect of sound produced in a dental clinic on the hearing of dentists. *Oral Health and Preventive Dentistry, 5*(3), 187-191.

British Society of Audiology. (2011). *Recommended procedure: Pure-tone air-conduction and bone-conduction threshold audiometry with and without masking.* British Society of Audiology Website. www.thebsa.org.uk.

Dental Association of Malta. (2014, April 16). *The dental association of malta website.* http://www.dam.com.mt/

Dunning Wilson, J., Leonardi Darby, M., Tolle, S.L., & Sever, J.C. (2002). Effects of occupational ultrasonic noise exposure on hearing of dental hygienists: A pilot study. *The Journal of Dental Hygiene, 76*(IV), 262-269.

Dutta, A., Mala, K., & Acharya, S.R. (2013). Sound levels in conservative dentistry and endodontics clinics. *Journal of Conservative Dentistry, 16*(2), 121-125. doi:10.4103/0972-0707.108188

Elmehdi, H.M. (2013). Noise levels in UAE dental clinics: Health impact on dental healthcare professionals. *Journal of Public Health Frontier, 2*(4), 189-192. doi:10/5963/PHF0204002

European Parliament & the Council of the European Union. (2003). Directive 2003/10/EC of the European Parliament and of the Council on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (noise). *Official Journal of the European Union, 42*, 38-44. Retrieved from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:042:0038:0044:EN:PDF

References (2)

Giglio de Oliveira Goncalves, C., Mendes Marques, J., Ribas, A., Bender Moreira de Lacerada, A., Barros Lobatos, D.C., Lacerada Costa, G., & Goncalves, G.A. (2012). Caracterization from hearing thresholds from dentists in a poulation from Curitiba city / PR, Brazil. *International Archives of Otorhinolaryngology, 16*(1), 32-38. Retrieved from http://www.internationalarchivesent.org/conteudo/acervo_eng.asp?id=824

Gijbels, F., Jacobs, R., Princen, K., Nackaerts, O., & Debruyne, F. (2006). Potential occupational health problems for dentists in Flanders, Belgium. *Clinical Oral Investigations, 10*, 8-16. DOI 10.1007/s00784-005-0003-6

Kadankuppe, S., Bhat, P.K., Jyothi, C., & Ramegowda, C. (2011). Assessment of noise levels of the equipments used in the dental teaching institution, Bangalore. *Indian Journal of Dental Research, 22*(3), 424-431. Retrieved from http://www.ijdr.in/text.asp?2011/22/3/424/87065

Khan, A.A., Qasmi, S.A., Askari, H., Shakoor, S., & Junejo, S.B. (2014). Prevalence of noise induced hearing loss among dentists working in Karachi, Pakistan. *Pakistan Oral and Dental Journal, 34*(1), 174-177. Retrieved from http://www.podj.com.pk/March_2014/PODJ-39.pdf

Lopes, A.C., & Godoy, J.B. (2006). Considerações metodológicas para a investigação dos limiares de frequência ultra-altas em indivíduos expostos ao ruído ocupacional. *Salusvita, 25*(2), 253-264. Retrieved from http://iah.iec.pa.gov.br/iah/fulltext/illacs/salusvita/2006v25n2/salusvita2006v25n2p149-160.pdf

Lopes, A.C., Passarelli de Melo, A.D., & Santos, C.C. (2012). A study of the high-frequency hearing thresholds of dentistry professionals. *International Archives of Otorhinolaryngology, 16*(2), 226-231. doi:10.7162/S1809-97772012000200012

Lourenco, E.A., da Rocha Berto, J.M., Butignolli Duarte, S., & Martins Greco, J.P. (2011). Can noise in dental clinic produce hearing loss? *International Archives of Otorhinolaryngology, 15*(1), 84-88. Retrieved from http://www.internationalarchivesent.org/conteudo/pdfFor/I/15-01-13-eng.pdf

Messano, G.A., & Petti, S. (2012). General dental practitioners and hearing impairment. *Journal of Dentistry, 40*(10), 821–828. http://dx.doi.org/10.1016/j.jdent.2012.06.006

References (3)

Mojarad, F., Massum, T., & Samavat, H. (2008). Noise levels in dental offices and laboratories in Hamedan, Iran. *Journal of Dentistry, Tehran University of Medical Sciences, 6*(4), 181-186. Retrieved from http://jdt.tums.ac.ir/index.php/jdt/article/view/214/208

Nassiri, P., Golbabai, F., & Mahmoudi, M. (1993). The effect of noise-induced hearing loss on dentists. *Medical Journal of the Islamic Republic of Iran, 7*(2), 83-86. Retrieved from http://tmjri.iums.ac.ir/files/site1/user_files_e9487e/azmi-A-10-298-641-ed7b5f6.pdf

Reitemeier, B., & Fritsche, F. (1990). The long-term effects of noise on dentists [Abstract]. *Zahn-Mund-Kieferheilkd Zentbl, 78*(8),735-9. Abstract retrieved from PubMed. (PMID: 2150465)

Santos, C.C. (2011). *Hearing health at the dentistry young adults: knowledge and audiological profile.* Retrieved from Digital Library of Theses and Dissertations, University of São Paulo. Retrieved from http://www.teses.usp.br/teses/disponiveis/25/25143/tde-27092011-150236/

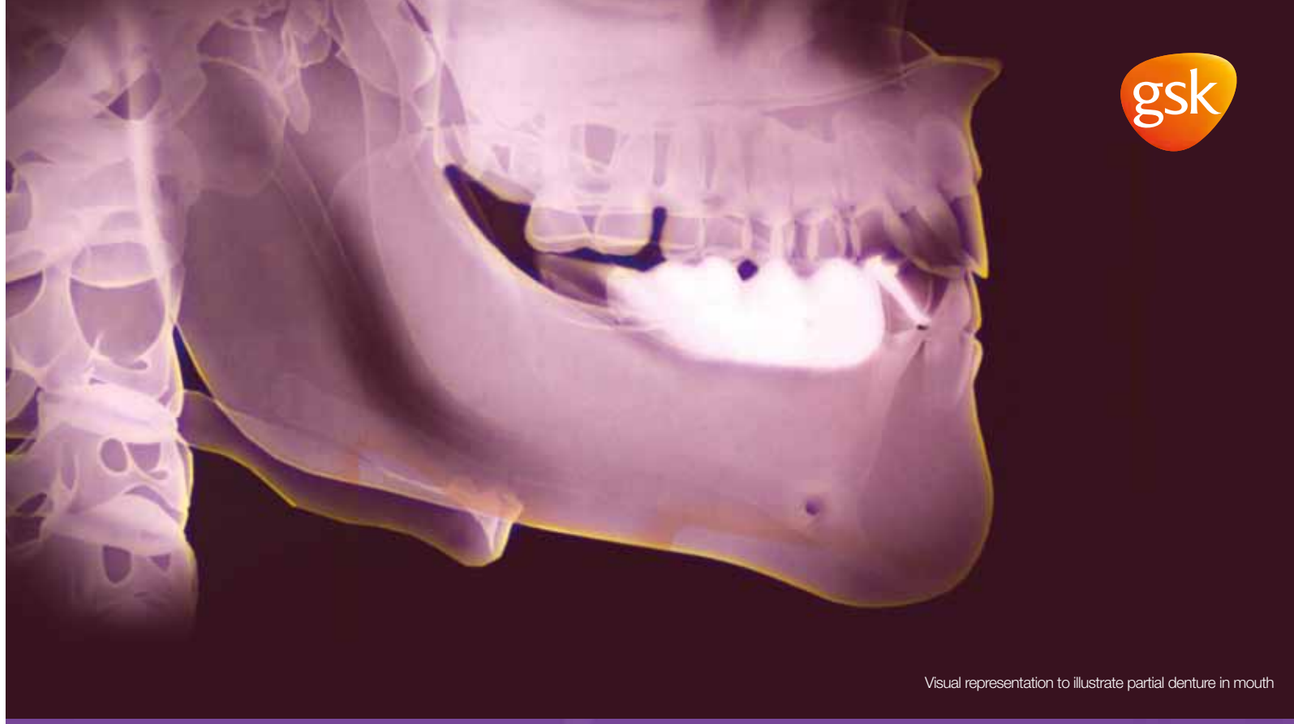
Singh, S., Singh Gambhir, R., Singh, G., Sharma, S., & Kaur, A. (2012). Noise levels in a dental teaching institute - a matter of concern. *Journal of Clinical and Experimental Dentistry, 4*(3), 141-145. doi:10.4317/jced.50725

SurveyMonkey. (2014, June 2). *SurveyMonkey website: Plans and pricing.* Retrieved from https://www.surveymonkey.com/pricing/?ut_source=header.

Szymanska, J. (2000). Work-related hazards in the dental surgery. *Annals of Agricultural and Environmental Medicine, 7*, 67-70. Retrieved from http://www.aaem.pl/pdf/aaem0012.pdf

Willershausen, B., Callaway, A., Wolf, T.G., Ehlers, V., Scholz, L., Wolf, D., & Letzel, S. (2014). Hearing assessment in dental practitioners and other academic professionals from an urban setting. *Head and Face Medicine, 10*(1), 1-7. doi:10.1186/1746-160X-10-1

Zubick, H.H., Tolentino, A.T., & Boffa, J. (1980). Hearing loss and the high speed dental handpiece. *American Journal of Public Health, 70*(6), 633-635. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1619451/pdf/amjph00679-0075.pdf



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References
1. Zlataric DK *et al.* J Periodontol 2002; 73: 137–144. **2.** Preshaw PM *et al.* J Dentistry 2011; 39: 711–719. **3.** Coulthwaite L. & Verran J. Brit J Biomed Sci 2007; 64: 180–189. **4.** Yeung ALP *et al.* J Oral Rehabil 2000; 27: 183-189. **5.** Budtz-Jörgensen E. J Dentistry 1996; 24: 237–244. **6.** Bergman B *et al.* J Clin Periodontol. 1977; 4:134–146. **7.** GSK Data on File, Lux R. 2012. **8.** GSK Data on File, Cleaning study 28 Jun 2011. **9.** GSK Data on File, Fernandez P *et al.* 2006. **10.** GSK Data on File, Alliance Corrosivity Report 2012. **11.** GSK Data on File, Murphy S *et al.* 2012.

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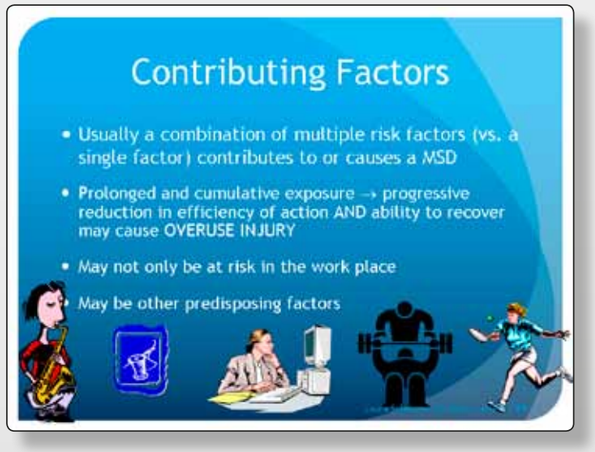
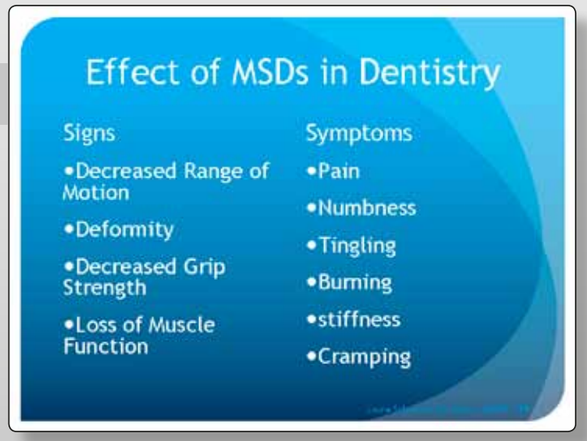
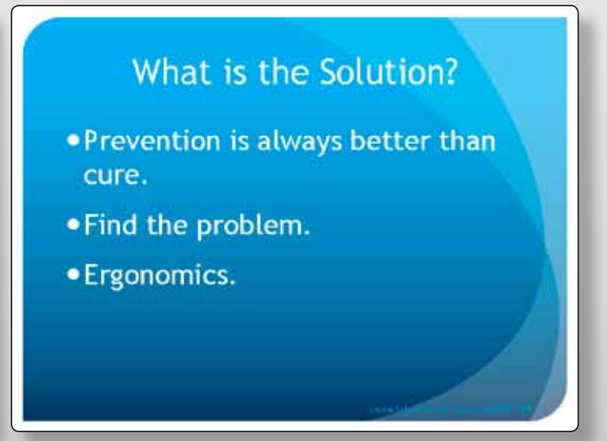
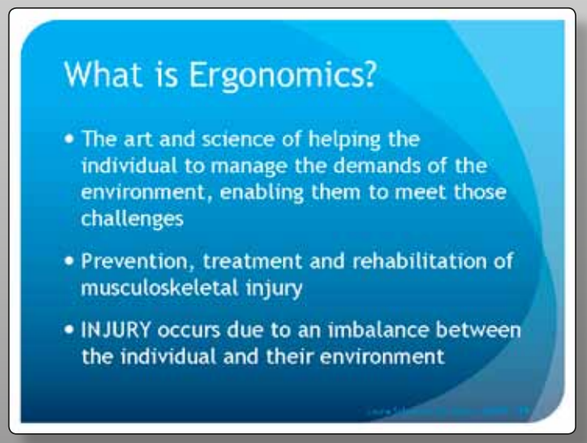
ERGONOMICS IN DENTISTRY

Laura Schembri BSc(Hons), MAPPI, SRP.









Continues on page 28.

ERGONOMICS IN DENTISTRY

Continues from page 25.

Management of injury

- Fatigue → strain → injury or recovery
- Need to identify risk factors
- Detective work
- Minimize risk
- → supportive environment
- 1st principle - minimize muscular workload to enable recovery to occur

Ergonomic Factors

Sitting Posture

- Predominant in Western society
- ↓ spinal curves
- ↓ circulation
- ↓ digestion
- ↓ quality of breathing
- → obesity
- → osteoporosis
- → arteriosclerosis

Sit Up Straight?

- Sitting is not a problem but How you sit is!
- Sitting straight is tiring- spinal muscles fatigue easily
- Good sitting requires the right tool (seat)
- Usually advised to sit with hips / knees at 90° flexion
- Difficult to maintain lumbar lordosis - especially for males as spine curves
- Should actually sit with hips flexed at 60°

Workplace Assessment

- Early recognition of problems
- Early ergonomic intervention
- Appropriate management and/or therapy
- Supportive environment

Preventing Ergonomic Injuries

- Change human behavior
- Consider ergonomic features for dental equipment (e.g., patient chairs, operator stools, hand/foot controls, instruments) when purchasing new equipment
- Modify working conditions to achieve optimal body posture
- Achieve optimum access, visibility, comfort, and control at all times

Good Seating

- Tasks that require upright postures should have a seat with a

  FORWARD slope of 20°-30°
- Chair:- waterfall front

  adjustable backrest

  variable positions
- Educate:- posture

  how to adjust seat correctly - often

  adjusted the wrong way.

Head and Neck

- Suboptimal postures held for long periods for visual purposes
- Weight of head magnifies loads
- Repetitive work of neck / arms → MSD
- Risk factors: Neck flexed > 15°

  Shoulder abducted > 60°

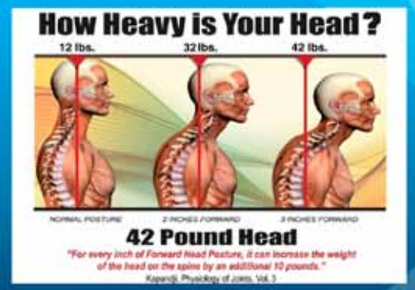
  ↑ time processing data

Posture

- One may have excellent equipment but not know how to use it!
- Good posture
- Minimal joint strain
- Minimal muscle loading
- Avoiding prolonged, repetitive, awkward movements

Standing Ergonomics

- Long periods ↑ compressive forces on lumbar spine and pelvis
- Footrests help
- Good shoes dissipate forces
- Standing work stations



Postural Effects on Neck

- Head and neck postures may predispose to early degeneration, instability and chronic neck problems
- Important to avoid prolonged:-

  Rotation

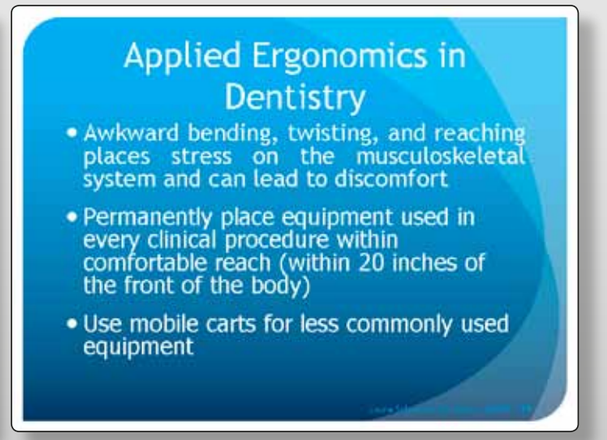
  Side flexion

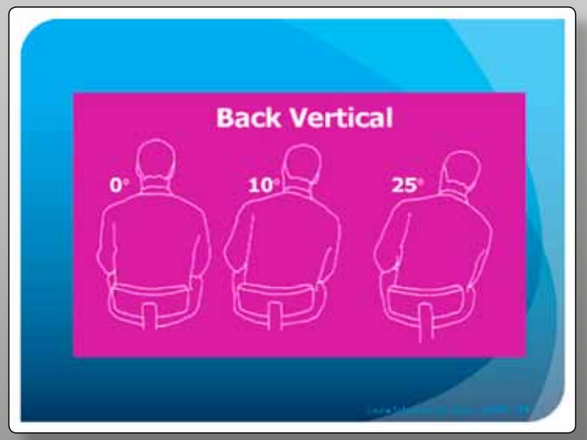
  Flexion

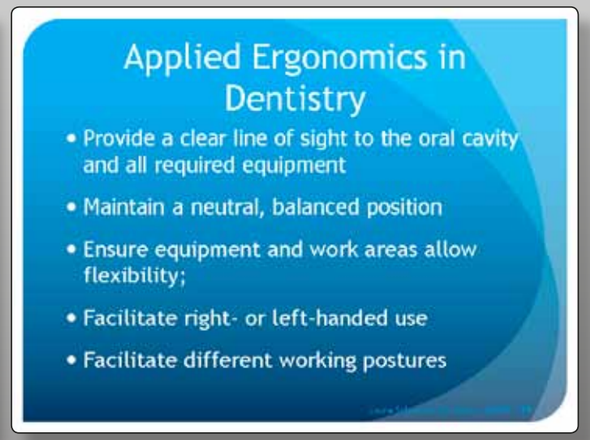
Continues on page 28.

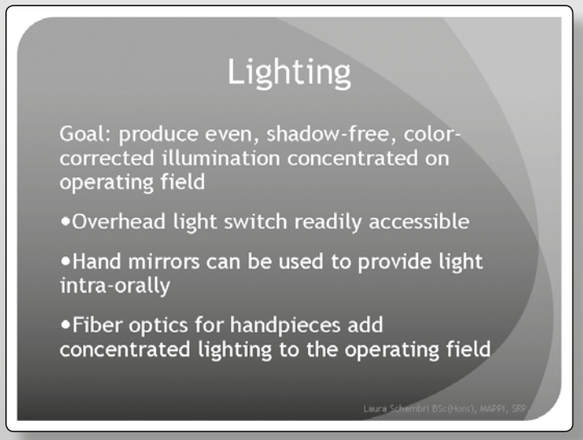
ERGONOMICS IN DENTISTRY

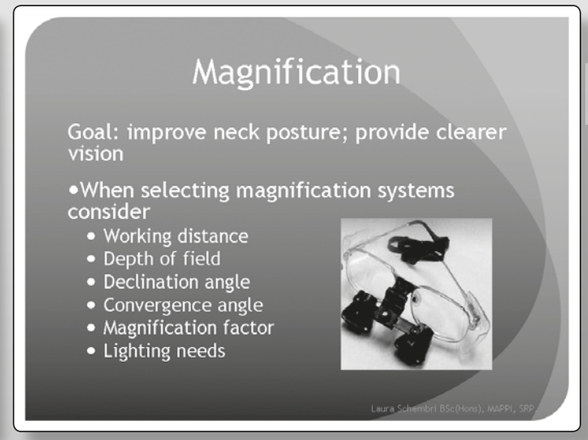
Continues from page 25.











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BUSINESS INSURANCE… DEEP ROOT TREATMENT OR WHAT?

What is the worst that can happen? Who knows it depends on how sever the storm can be!. How hard financially can it hit me? It can never be that bad… can it? These few sentences which are common between friends and business colleague are all within the context of what it would mean if business insurance cover was not purchased and you left your business risk or risks in the hands of a greater power and always hoping for the best. We never really expect that a major disaster can hit us as it always happens to someone else… never to us!

In realistic terms an insurance policy covering the business operation is going to cost and arm and a leg indeed require deep root basic policy can offer simple and yet that will let business without additional finances lay wide that can and cannot a simple insurance policy can protection for the following:

- Building, Furniture, Fixtures and Fittings
- Equipment and tools [fixed and portable]
- Stocks
- Rent
- Glass
- Machinery
- Money
- Personal Accident

In addition to can also be bilities to the general and trips and even to the neighbours. be covered for work ies where the employer is liable to pay compensation.

Where one would want to expand the cover more a business interruption cover will provide payment in the event that the business will incur downtime and where the turnover can be covered for the loss of Gross Profit.

Think it over but don't be left exposed. Talk to your insurance advisor to make an discuss your its.

no obligation quotation on 234 or email info@mib.com.mt

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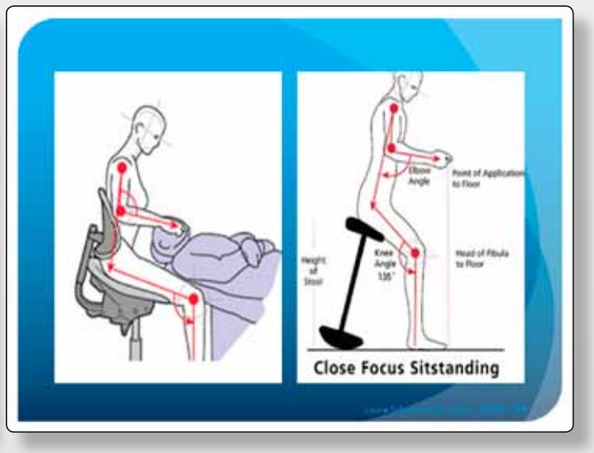
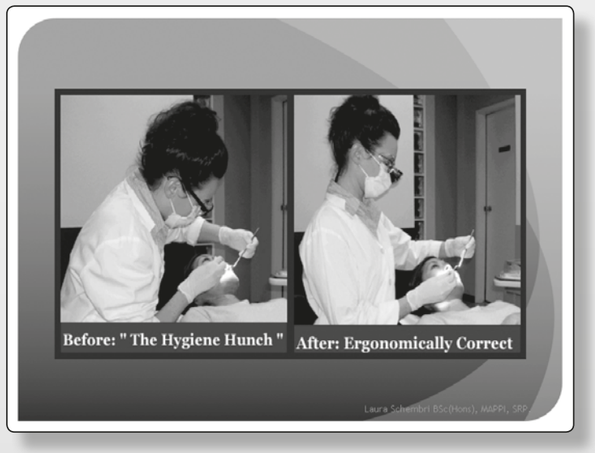
ERGONOMICS IN DENTISTRY

Continues from page 25.





Work Practice

Goal: maintain neutral posture; reduce force requirements

Potential strategies

- Ensure instruments are sharpened, well-maintained
- Use automatic handpieces instead of manual instruments wherever possible
- Use full-arm strokes rather than wrist strokes

Good vs Bad Sitting

Patient Chair

Goal: promote patient comfort/maximize patient access

Look for:

- Stability
- Pivoting or drop-down arm rests (for patient ingress/egress)
- Fully adjustable head rest
- Hands-free operation

Schedule Your Lists

Goal: provide sufficient recovery time to avoid muscular fatigue

Potential strategies

- Increase treatment time for more difficult patients
- Alternate heavy and light calculus patients within a schedule
- Vary procedures within the same appointment
- Shorten patient's recall interval

Personal Protective Equipment

Glasses

- Lightweight, clean, well-fitted
- Magnifying lenses and head lamps are encouraged

Clothing

- Fit loosely, lightweight, pliable

Gloves

- Be of proper size, lightweight, and pliable
- Should fit hands and fingers snugly
- Should not fit tightly across wrist/forearm
- Should be right/left fit

Posture in Dentistry

Goal: avoid static and/or awkward positions

Potential strategies

- Position patient so that operator's elbows are elevated no more than 30 degrees
- Adjust patient chair when accessing different quadrants
- Alternate between standing and sitting

When In Pain....

- If it is the first instance of pain you need to reason out what caused it and if still there after 48 hours see your doctor.
- If the pain does not respond to medication there may be a mechanical problem- this will be dealt with by your physiotherapist.
- Mechanical problems are often due to poor posture and muscle imbalances.
- Some muscles will be too stiff and some muscles may be weak or too slow to work.

Summary

- Avoid fatigue / injury
- Good work place design
- Interesting and varied tasks
- Comfortable postures with optimal neuromuscular efficiency
- Work at a sensible pace
- Opportunity for short regular breaks
- Avoid prolonged hours
- Seek help if in pain > 48 hours

POLYCYSTIC OVARY SYNDROME

A COMMON CONDITION, COMMONLY MISSED

Dr Charles Corney MB, BS, DMRD, FRCR
Medical Practitioner and Researcher

A 25 year old female attended her dental practitioner for a routine dental and oral check which revealed no abnormality. However, the practitioner noticed the presence of a mild, hairy moustache over the upper lip and the presence of quite extensive facial acne.

He concluded that these findings suggested an excess of testosterone and referred her to an endocrinologist who, after a clinical examination and tests, diagnosed the presence of Polycystic Ovary Syndrome.

WHAT IS POLYCYSTIC OVARY SYNDROME?
This is an increasingly common condition currently affecting 10% of young women. The two basic features are hirsutism [from excessive testosterone] and fat deposition [from insulin resistance] both of which lead to other hormone imbalances producing further symptoms.

Also, the ovaries produce characteristic, multiple small cysts [microcysts]. Polycystic Ovary Syndrome [PCOS] does not produce large ovarian cysts- which have other causes.

WHO IS LIKELY TO SUFFER PCOS?
The patient often volunteers one or more of the following histories:-

1. PCOS in the family, [a genetic fault].
2. using oral contraceptives whose hormones are not identical to those of the body, [a chemical malfunction].
3. eating excessive amounts of carbohydrates, triggering excessive insulin release, [a chemical malfunction].

WHAT ARE THE EFFECTS?
In order to explain PCOS symptoms, an understanding of the disease process is necessary.

The most common factor is the eating of excessive carbohydrates [history number 3]. The cells of the body require glucose for nutrition and function, and insulin, a hormone secreted by the pancreas, to allow glucose to enter the cells.

Once insulin has prompted transfer of glucose into the cells from the bloodstream, any residual, excess insulin converts the remaining glucose into glycogen, and then into fatty acids and cholesterol leading to fat deposition and consequent weight increase.

Subsequently, the cells become resistant to insulin [termed 'Insulin Resistance'], and thus starved of glucose. So, the glucose accumulates in the bloodstream as it can no longer be utilised by the cells. At this stage, the insulin resistance prompts excessive testosterone secretion by the ovaries which undergo microcyst proliferation, characteristic of PCOS.

Moreover, the cells switch their nutrition and functioning to fat sources, causing further rises in blood levels of fatty acids and cholesterol with more fat deposition. Once the fat starts to accumulate in the abdominal cavity, excessive secretion of certain hormones [such as angiotensin, adipocytokine, cytokine and oestrogen] occurs.

These cause yet more obesity, high blood pressure, diabetes mellitus type 2 [a 4 fold risk], and premature arterial disease causing heart attack and stroke at an early age with also a risk of cancer of the breast and the body of the womb.

Normally the ovary sheds an egg monthly [known as ovulation] leaving behind an empty space [known as the 'corpus luteum'] which then starts secreting the hormone, progesterone, necessary for fertility and possible pregnancy.

In PCOS, the ovarian microcysts prevent the normal monthly shedding of an egg, so no corpus luteum develops and thus progesterone is not secreted.

The progesterone level becomes so low that fertility is lowered, with a reduced chance of pregnancy. The low progesterone also causes premenstrual tension with infrequent periods, and accentuates the arterial and cancer risk.

Recent research by <Dr John R Lee MD> revealed that the non-identical nature of the hormones in the contraceptive pill and coil to those of the body may lead to further lowering of the progesterone level in many women, adding to the fat deposition, high blood pressure, premature arterial disease, diabetes and cancer risks mentioned above. This is the explanation for history number 2.

WHAT ARE THE SYMPTOMS?
PCOS usually commences slowly and insidiously with few specific symptoms, but if this diagnosis is not considered and treated, then more symptoms appear gradually over a number of years.

Finally, there is a realisation that PCOS is likely. This diagnosis is confirmed by ultrasound scanning revealing microcysts of the ovaries, and blood analysis revealing high testosterone, insulin and glucose levels with a low progesterone level.

These symptoms may occur singly or in combination:

- Weight increase [from insulin resistance]
- Acne [from high testosterone]
- Facial hair requiring shaving [from high testosterone]
- Infrequent periods [from the long term presence of microcysts and high testosterone]
- No ovulation [from the long term presence of microcysts and high testosterone]
- Infertility [from low progesterone]
- Premenstrual tension [from low progesterone]

These conditions, with the above symptoms, indicate advanced, untreated PCOS:

- High blood pressure
- High cholesterol
- Heart attack or stroke at a young age
- High blood glucose
- Diabetes mellitus type 2

IS PCOS TREATABLE?
With this complex interplay of hormone imbalance triggering another imbalance or condition, one would think that PCOS treatment was complex also.

However, the main aim is firstly to treat the two basic features of high testosterone and insulin resistance. Replacing some of the dietary carbohydrate overload with more protein, and avoiding fattening food additives, such as lard and high fructose corn syrup, the excess weight, insulin resistance and testosterone are reduced, leading to some rebalancing of the hormones.

Furthermore, facial hair, acne, premenstrual tension and the infertility due to lack of ovulation often respond well to the application of bioidentical progesterone cream [same chemical structure as the body's progesterone], which raises the low body progesterone and lowers the high body testosterone.

If a lack of ovulation persists and the patient is wishing to start a family, then clomid or human chorionic gonadotrophin is given to stimulate ovulation.

Failure of this treatment requires a minor laparoscopic operation to obliterate all the ovarian microcysts. This often precipitates ovulation permitting pregnancy.

When the patient has more advanced PCOS, showing diabetic tendencies or cardiovascular problems, a specialist opinion is advised as the patient could well benefit from oral antidiabetic medication [especially metformin], which further decreases insulin resistance and the disease process, thus reducing the symptoms and long term risks.

The presence of high cholesterol, high blood pressure, diabetes and cardiovascular disease will require individual treatment.

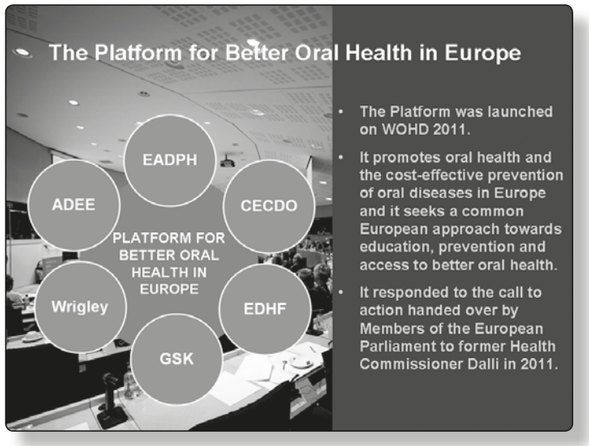
CONCLUSION
PCOS is a very common condition which is often mild. Lord Cohen of Birkenhead, a famous British physician, advised 'common conditions are common', so PCOS should always be considered even if the early symptoms are non specific.

Earlier recognition, leading to prompt treatment, is vital to stop the disease or reduce its self perpetuating tendencies leading to life shortening complications.

Thanks to the vigilant dental practitioner, the patient made a good recovery in 18 months with a loss of the moustache and acne together with weight loss and correction of the hormone imbalance.

THE PLATFORM FOR BETTER ORAL HEALTH IN EUROPE (PBOHE) – AN UPDATE

Professor Ken Eaton, Chair of the PBOHE



Continues on page 34.

THE PLATFORM FOR BETTER ORAL HEALTH IN EUROPE (PBOHE) – AN UPDATE

Continues from page 32.

5 key policy recommendations

1. Develop a **coherent European strategy** to improve oral health with commitments to **quantifiable targets by 2020**
2. Improve the **data and knowledge base** by developing **common methodologies** and bridging the research gap in oral health promotion
3. Support the development of **cross-sectoral approaches** with health and social care professions and support the development of the **dental workforce**
4. Address **increasing oral health inequalities** and **knowledge of prevention/oral hygiene practices** of the public and guarantee availability and access to high quality and affordable oral health care
5. Encourage **best practice sharing** across countries

TARGETS 2020

Main areas for the targets:

- Improved data collection systems
- Preventive policies
- Education and awareness

WHY THESE TARGETS? (1)

- Oral health-related costs are still rising despite the fact that oral diseases are highly preventable
- Current spending in dental treatment in the EU-27 was estimated to be close to 79 billion EUR in 2012
- The current oral health workforce in the EU is over 1 million and includes over 390,000 dentists and over 400,000 dental chair-side assistants (nurses)

9

WHY THESE TARGETS? (2)

- Despite significant achievements in the prevention of caries, this disease remains a problem in particular for many groups of people in Eastern Europe and in socio-economically deprived groups in all EU Member States;
- Trends in the prevalence of gum disease and oral cancer across Europe are also worrying;
- The evidence-base available for decision making on oral health-related matters remains very poor.

10

THE REPORT CARD

- To assess progress, since the publication of The State of Oral Health in Europe, in the Autumn of 2013 a questionnaire was sent to selected members of ADEE, CECDO and EADPH.

IMMEDIATE REPORT FINDINGS

Workforce planning

7. Is there a national oral healthcare workforce plan?

   Yes in 10 out of 25 Member States

8. Are the number of training places for dental students controlled?

   Yes in 19 out of 25 Member States

IMMEDIATE REPORT FINDINGS

ADEE competence domain for prevention and health promotion

11. Only 14 Member States responded, of whom 12 stated that 100% of their dental schools had integrated this into their curricula.

Oral Cancer diagnosis

12. With minor variation, reported as being taught in all Members States all levels of dental education.

JOINT ACTIONS

- The Platform is currently a collaborating member of two European Commission Joint Actions (JAs)
  - CHRODIS
  - Health Care Workforce Planning and Forecasting

CHRODIS JA – WHAT IS IT?

- European Commission Joint Action addressing chronic diseases and promoting healthy ageing across the life cycle
- Mainly focuses on cardio-vascular diseases (including stroke) and type 2 diabetes
- Includes over 60 associate partners and collaborating partners
- Lead by Instituto de Salud Carlos III, Madrid
- Runs from 2014 – 2016

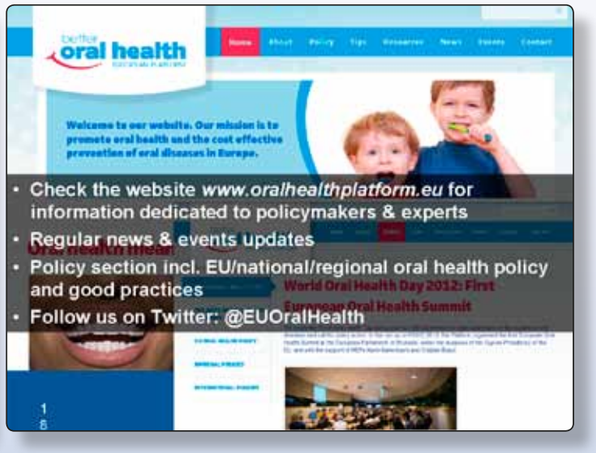
EC CONSULTATIONS

Recently, the Platform has responded to EC consultations on:

- Horizon 2020 priorities for 2016/17
- Definition of primary care
- Comments on opinion of the report on a systematic review of the dangers to health arising from dental amalgam and alternative filling materials

WHAT NEXT?

- Recent planning workshop
- Continuation of present actions
- Increasing integration of oral health into general health
- More collaborative working with a broader range of supporting organisations
- Future events



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So what do You know about Trusts ?

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Collaborating with the Malta Dental Association

- Thank you for giving us this opportunity.
- On a Macro level our intentions are:
  - Increase awareness in the use of Trusts;
  - Eliminate wrong perceptions;
  - Nurture a generational and cultural change towards Trusts.

GTFL

Trusts are NOT :

- Complicated;
- Pricy and Costly;

They are confidential and private

GTFL

Trusts are NOT Complicated

- Over the years the Trust industry has become more user friendly in an attempt to make trusts more mainstream;
- They are personal, they must be tailored to the specific family and estate planning objectives.

GTFL

Trusts are NOT Pricy

- Common myth, is that Trusts are expensive, only available for the very wealthy – NOT TRUE; and
- Fees need NOT be based on asset Value but on time spent.

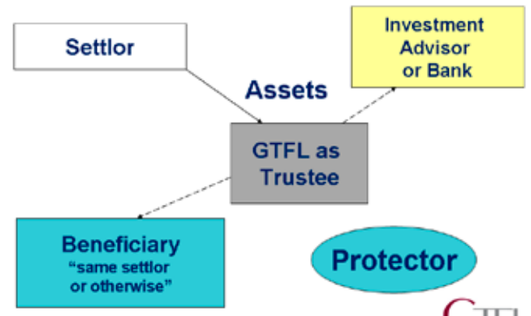
GTFL

Trusts are Confidential :

- Unlike other asset holding structures such as a limited liability company or potentially a foundation, a Trust is NOT registered anywhere;
- It is an agreement, evidenced through a Trust Deed, between the Settlor and Trustee; and
- Assets settled are in the Name of the Trustee, Legal Ownership vs Beneficial Ownership.

GTFL

Parties Involved



GTFL

Parties involved : The Settlor

- The Settlor is the individual who settles the Asset in Trust for the Beneficiaries of the Trust;
- In the Family scenario, the Settlor or Settlors are usually the parents or grand parents

GTFL

Parties involved : The Beneficiary

- The Beneficiary is an individual or a group of individuals who will benefit from the Assets of the Trust;
- In the Family scenario, the Beneficiary or the Beneficiaries are usually initially the parents themselves and subsequently the children.

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Continues on page 38.

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TRUSTS FOR PROFESSIONALS

Continues from page 37.

Parties involved : The Trustee

- The Trustee is responsible to administer the trust assets in accordance with the Trust deed;
- The Trustee must always act in the best interest of the Beneficiary; and
- The Trustee is authorised by the Malta Financial Services Authority.

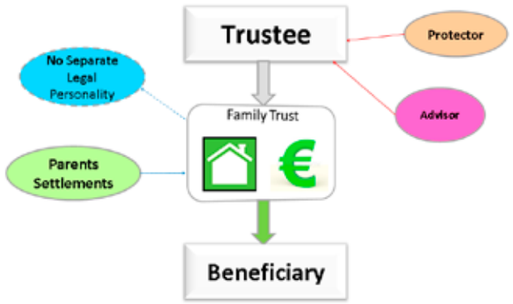
GTFL

Parties involved : The Protector

- The Protector is the individual with whom the Trustee will consult in taking certain decisions;
- The Protector has the ultimate power of removing the Trustee; and
- In the family context the Protector is usually a family member or a trusted family friend.

GTFL

So how does it work?



So Why Set up a Trust

- A Trust is a personal matter and each family situation is different.
- It has to be designed and tailored around ***your needs and those of your dependants***

GTFL

So Why Set up a Trust

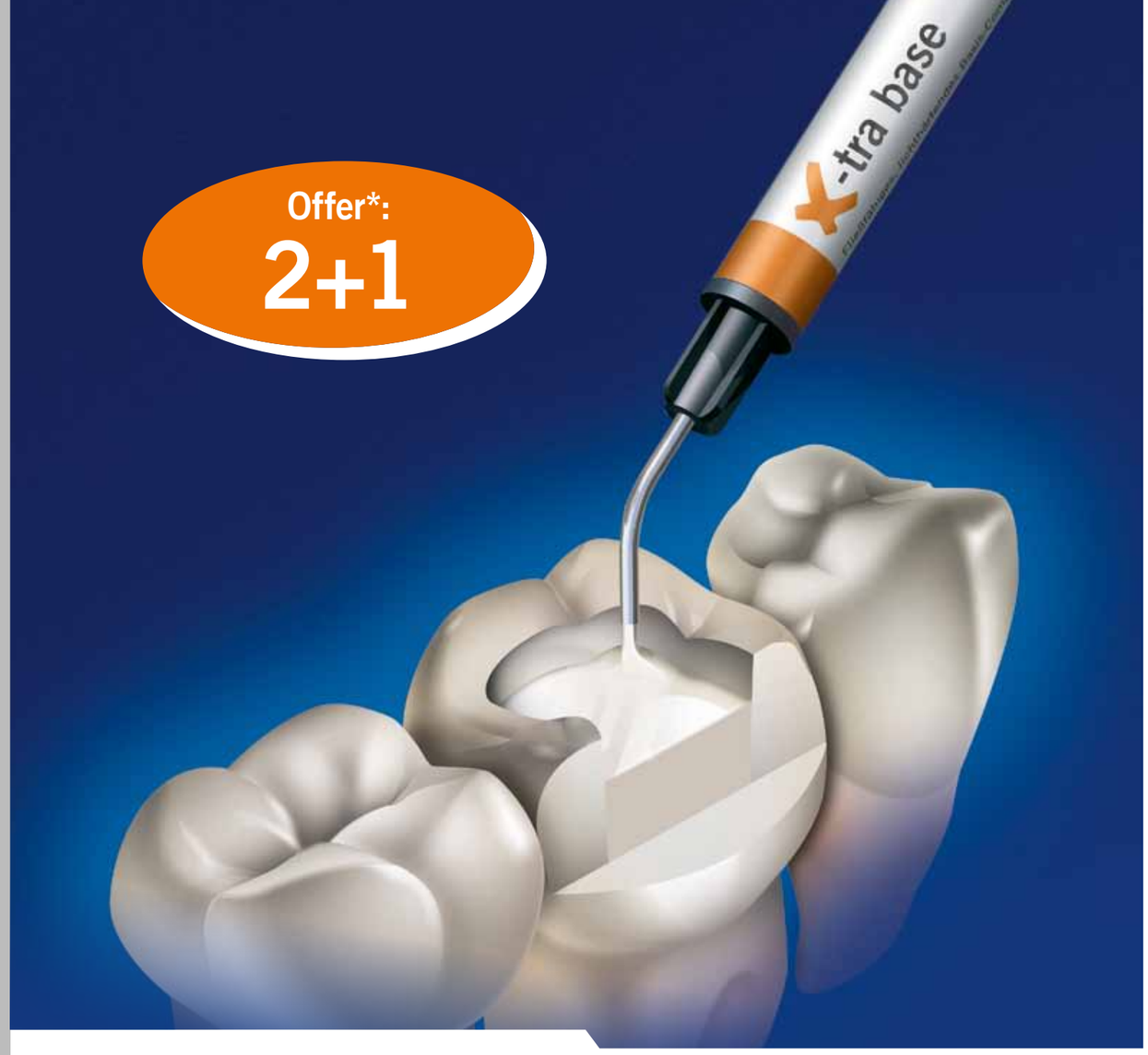
- Safeguards the assets in a separate pot, thus protecting against future creditor claims (unless deliberately fraudulent)
- Reinforces a culture to save and ensures sensible use of savings

GTFL

So Why Set up a Trust

- Avoids the assets getting caught up in inheritance issues
- Preserves family wealth against spendthrift children and ultimately an efficient tool to manage family patrimonial issues.

GTFL



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