WWW.UKDENT.COM

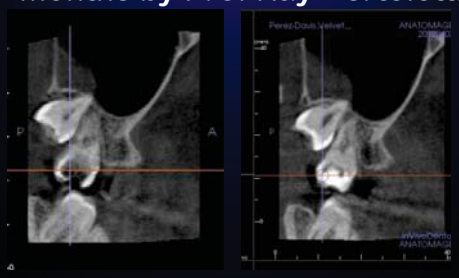
LIMITED TIME SPECIAL OFFER ON NEW HEALOZONE x4

WE HAVE REDISCOVERED *HEALING* DENTISTRY

LESS *IS* MORE

THANK YOU !

HealOzone / Fuji Triage: 6 months by Prof Ray Bertolotti



Activators

Oper Dent. 2011 Mar-Apr;36(2):162-8.
The influence of chemical activation on tooth bleaching using 10% carbamide peroxide.
Batista GR, Barcellos DC, Torres CR, Goto EH, Pucci CR, Borges AB.

- Adding 0.01% manganese gluconate to 10% carbamide peroxide bleaching gel increased the degree of tooth bleaching after a seven-day treatment and did not influence the resulting shade after 14 days.

Dental Materials Journal 2011; 30(5): 723–729

Effect of light units on tooth bleaching with visible-light activating titanium dioxide photocatalyst

Ayaka KISHI[1], Masayuki OTSUKI[1], Alireza SADR[2], Masaomi IKEDA[3] and Junji TAGAMI[1,2]

This study evaluated the influence of different light sources on the efficiency of an office bleaching agent containing visible-light activating titanium dioxide photocatalyst (VL-TiO2).

Dental Materials Journal 2011; 30(5): 723–729
Effect of light units on tooth bleaching with visible-light activating titanium dioxide photocatalyst
Ayaka KISHI et al

The blue and violet LED light curing was more effective than blue LED light curing and conventional halogen lamp for tooth bleaching with an office bleaching agent containing visible-light activating titanium dioxide photocatalyst (VL-TiO2)

Chlorine dioxide

Lynch E. *et al.* (1997)

Multicomponent spectroscopic investigations of salivary antioxidant consumption by an oral preparation containing the stable free radical species chlorine dioxide ($ClO_2^{\bullet}$).

Free Radical Research 26:209-237.

Peroxoborate

Lynch E . *et al.* (1999)

Multicomponent evaluations of the oxidising actions and status of a peroxoborate-containing tooth-whitening system in whole human saliva using high resolution proton NMR spectroscopy.

Journal of Inorganic Biochemistry 73: 65-84.

Surgery Bleaching

Ozone activates hydrogen peroxide

Can HealOzone whiten teeth?

Ozonated gel and Composite restorations

SCIENTIFIC ARTICLE

Australian Dental Journal 2010; 55: 390–398

doi: 10.1111/j.1834-7819.2010.01259.x

Effect of bleaching versus repolishing on colour and surface topography of stained resin composite

M Abd Elhamid,* R Mosallam†

*El Seka El Haded Hospital, Cairo, Egypt.
†Department of Operative Dentistry, Faculty of Oral and Dental Medicine, Cairo University, Egypt.

Ozonated gel and Composite Restorations

"Superior whitening effect was demonstrated with the ozonated gel. Ozonated gel showed statistically significant lowest roughness compared to both carbamide peroxide and polishing paste."

Ozonated gel and composite restorations

Table 4. Difference between the three whitening methods regarding surface roughness

Whitening method (I)	Whitening method (J)	Mean difference (I-J)	P
Carbamide peroxide	Polishing paste	−0.800	0.208
	Ozonated gel	*1.600	0.003*
Polishing paste	Carbamide peroxide	0.800	0.208
	Ozonated gel	*2.400	0.000*
Ozonated gel	Carbamide peroxide	*−1.600	0.003*
	Polishing paste	*−2.400	0.000*

*Significant at $P \leq 0.05$.

"Ozone is an efficient bleaching agent with the least adverse effect on surface roughness."

Ozone and effluent biodegradability

Advanced oxidation of bleached eucalypt kraft pulp mill effluent

A.H. Mounteer, R.O. Pereira, A.A. Morais, D.B. Ruas, D.S.A. Silveira, D.B. Viana and R.C. Medeiros

Civil Engineering Department, Federal University of Viçosa, 36570-000 Viçosa, MG, Brazil (Email: anr@ufv.br)

The O3/H2O2 process increased effluent biodegradability by up to 68%. Increasing the O3 dose had a greater effect on biodegradability improvement and lignin and colour removal efficiencies than increasing the H2O2 dose.

ELSEVIER

Available online at www.sciencedirect.com

ScienceDirect

Bioresource Technology 99 (2008) 472–478

BIORESOURCE TECHNOLOGY

Arundo donax L. reed: New perspectives for pulping and bleaching. 5. Ozone-based TCF bleaching of organosolv pulps

A.A. Shatalov *, H. Pereira

Centro de Estudos Florestais, Universidade Técnica de Lisboa, Instituto Superior de Agronomia, Tapada da Ajuda, 1349-017 Lisboa, Portugal

Received 22 September 2006; received in revised form 17 January 2007; accepted 21 January 2007
Available online 12 March 2007

The pulps can be bleached to brightness values of 80–83% ISO by a short ozone-based TCF bleaching sequence.

WATER RESEARCH 40 (2006) 525–532

Available at www.sciencedirect.com

SCIENCE DIRECT®

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WATER RESEARCH

UV-based processes for reactive azo dye mineralization

Igor Peternel, Natalija Koprivanac, Hrvoje Kusic*

Faculty of Chemical Engineering and Technology, University of Zagreb, Marulicev trg 19, Zagreb 10000, Croatia

"In the present study, advanced oxidation processes, UV/H2O2, UV/O3, and UV/H2O2/O3 have been applied to bleach and degrade an organic dye. UV/H2O2/O3 process was the most efficient."

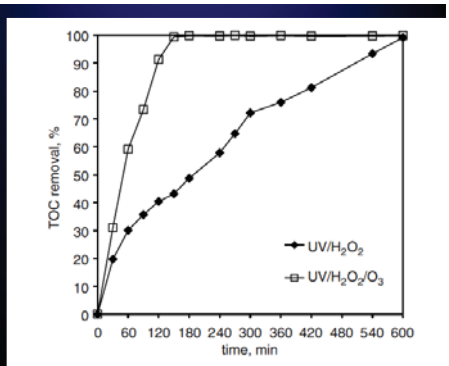
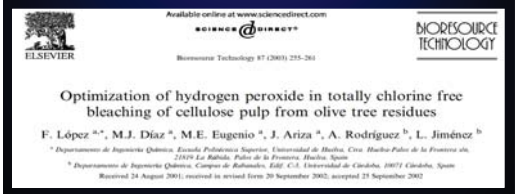


Fig. 9 – Comparison of time required for complete

Dechlorination and decolorization of chloro-organics in pulp bleach plant E-1 effluents by advanced oxidation processes

Rui Wang, Chen-Loung Chen, Josef S. Gratzl

Introduction of ozone stream into the UV-photolysis system result in appreciable improvement in both decolorization and dechlorination.



Optimization of hydrogen peroxide in totally chlorine free bleaching of cellulose pulp from olive tree residues

F. López, M.J. Díaz, M.E. Eugenio, J. Ariza, A. Rodríguez, L. Jiménez

Considerable improvements were obtained with respect to other bleaching sequences such as ozone. Hydrogen peroxide bleaching decreased the kappa index 51.3% less than ozone bleaching.

Bleaching; Ozone and hydrogen peroxide combinations

Effect of ozone, chlorine and hydrogen peroxide on the elimination of colour in treated textile wastewater by MBR.

Water Sci Technol 2004;49(4):299-303

Brik M; Chamam B; Schoberl P; Braun R; Fuchs W

Effect of oxygen, ozone and hydrogen peroxide bleaching stages on the contents and composition of extractives of Eucalyptus globulus kraft pulps. Bioresour Technol 2006 Feb;97(3):420-8

Freire CS; Silvestre AJ; Pascoal Neto C; Evtuguin DV

Dechlorination of chlorophenols found in pulp bleach plant E-1 effluents by advanced oxidation processes.

Bioresour Technol 2005 May;96(8):897-906

Wang R; Chen CL; Gratzl JS

Rate of dibutylsulfide decomposition by ozonation and the O3/H2O2 advanced oxidation process.

J Hazard Mater 2009 May 30;164(2-3):1364-71

Popiel S; Nalepa T; Dzierzak D; Stankiewicz R; Witkiewicz Z

Dehalogenation, degradation and mineralization of diuron by peroxone (peroxide/ozone) treatment.

J Environ Sci Health A Tox Hazard Subst Environ Eng 44;6(630-8 S1093-4529

Catalkaya EC; Kargi F

Kinetics study on photochemical oxidation of polyacrylamide by ozone combined with hydrogen peroxide and ultraviolet radiation. J Environ Sci (China)

2006;18(4):660-4

Ren GM; Sun DZ; Chung JS

Elimination of Listeria monocytogenes biofilms by ozone, chlorine, and hydrogen peroxide.

J Food Prot 2005 Mar;68(3):494-8

Robbins JB; Fisher CW; Moltz AG; Martin SE

An ozone/hydrogen peroxide/microwave-enhanced advanced oxidation process for sewage sludge treatment.

J Environ Sci Health A Tox Hazard Subst Environ Eng 42;8(1177-81 S1093-4529

Yin G; Liao PH; Lo KV

.

Oxidative degradation of N-nitrosodimethylamine by conventional ozonation and the advanced oxidation process ozone/hydrogen peroxide.

Water Res 2007 Feb;41(3):581-90

Lee C; Yoon J; Von Gunten U

.

Treatment of volatile organic chemicals on the EPA Contaminant Candidate List using ozonation and the O3/H2O2 advanced oxidation process.
Environ Sci Technol 2006 Apr 15;40(8):2734-9

Chen WR; Sharpless CM; Linden KG; Suffet IH

Grootveld M, Silwood C, Lynch E.

Biofactors 2006; 27: 5 – 18.

Oxidative Consumption of Biomolecules by Ozone; Clinical Relevence.

J Ir Dent Assoc. 1996;42(3):74-6.

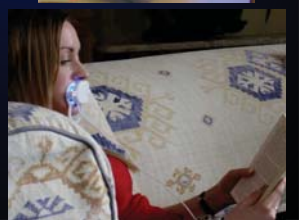
Professional bleaching of teeth in dental practice techniques.

Samarawickrama DY, Lynch E, et al

Surgery Bleaching

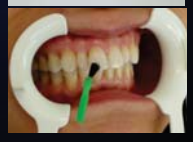
Ozone activates hydrogen peroxide

- No impressions
- No trays
- No sensitivity
- No paint-on dam



New paint-on system with get2smile Thermal Diffuser

- Gentle raised temperature of bleaching gel at gel/enamel interface
- Enhancing diffusion of gel inside enamel
- wy10 10% H_2O_2



Professor Lawrence Walsh, Dean, Brisbane, Australia.

Also proved the efficacy of the HealOzone to activate peroxide

Internal bleaching

HealOzone and the walking bleach technique

Access and Seal over GP

37% Phosphoric Acid Etch

Paste of Sodium Perborate Powder and H_2O_2

HealOzone 30 seconds

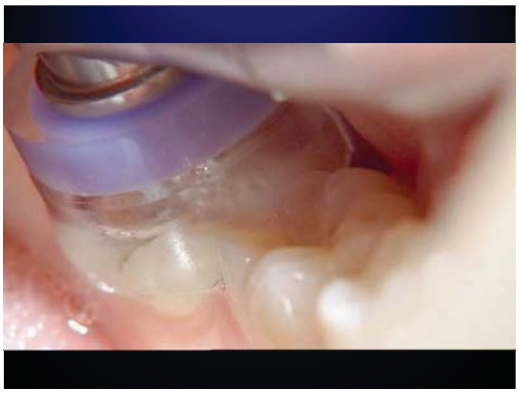
Seal with GIC 1 wk

Biocompatible

- **healOzone X4**
- **Curozone**

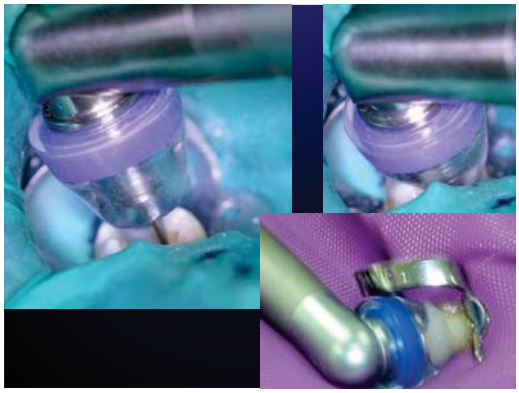
- **www.ukdent.com**
- **E.lynch@warwick.ac.uk**

HealOzone handpiece from CurOzone Germany



HealOzone (CurOzone Germany) 2,350 ppm ozone, 615 cc /min flow rate X4 = 9400 ppm Ozone

HealOzone handpiece from CurOzone Germany used to deliver Ozone gas into root canals



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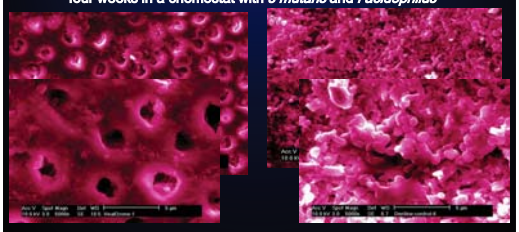
Treatment of dentine with HealOzone

HealOzone — control

four weeks in a chemostat with *s mutans* and *l acidophilus*



Knight GM et al. , Aust Dent J 2008;53:349-353.

Ozone (O_3) treatment of caries:

- The "ecological niche" of acidogenic and aciduric microorganisms is eliminated, for at least 14 weeks
- Remineralization overpowers demineralization
- Rapid remineralization occurs

- **Some examples of radiograhic changes in Ozone treated caries follows**

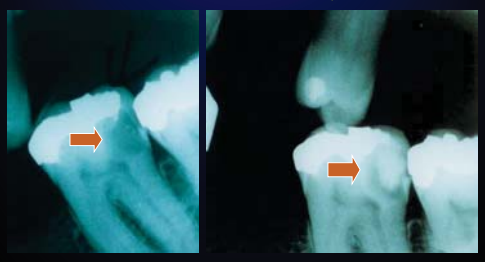
3 months later

Photo Courtesy of Dr Julian Holmes

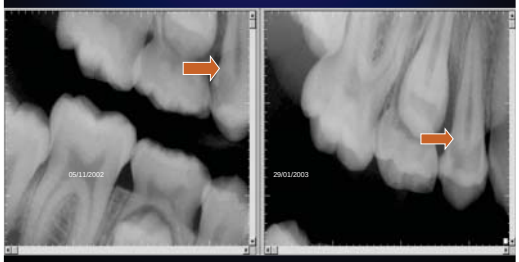
Ozone and 3 months. Dipak Joshi

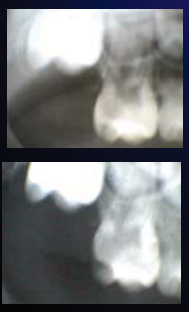
DEEP CARIES

OZONE AND FUJI 7 GLASS IONOMER, 3 MONTH RESULT



DEEP CARIES CASE
COURTESY J. HOLMES

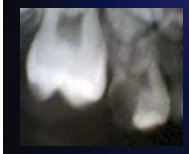




"I have included a sequence of X-rays I did on one of these patients."

X-ray 1: Child patient aged 4 years. Presents with rampant bottle decay on all teeth. No pain or infection present. Suggested GA with pulpotomy to try to save 55 to allow 16 to erupt into favourable position. Parents refused general anesthesia.

X-ray 2: Child presents 6 months later. Again, no pain or infection. Parents do not want GA. Child uncooperative but allowed ART technique with Fuji IX.



X-ray 3: Child returned over one year later as an emergency with toothache. ART technique had failed on 55. Child still unable to have conventional dentistry performed in the chair. Parents still unwilling to accept GA. Ozone from the Healozone and Fuji VII was used.

X-ray 4: Child came for a "check-up" just over 1 year later. Miraculous! No pain or infection. The 16 has erupted perfectly into position.

My question here is: how is the tooth "healing"?
Please can you explain the mechanism by which this hyper-mineralised tissue is formed?

Huth K, Paschos E, Brand and Hickel R.
Effect of Healozone on non cavitated fissure carious lesions in permanent molars. A controlled prospective study.

American Journal of Dentistry 2005; 18: 223 – 270.

Most Dentists charge the same fee for Ozone treatment and sealing (flowable composite) of an occlusal caries lesion as they do for a posterior composite.
This saves the Dentist time

Reversal of deciduous caries after HealOzone treatment

Dahrhardt J, Jaeggi T, Lussi A.
Treating open carious lesions in anxious children with ozone. A prospective controlled clinical study.
American Journal of Dentistry 2006; 19: 267 – 270.

Reversal of Deciduous Caries using HealOzone

M Phil Thesis, UK 2004

OT.Abu-Salem

HealOzone uses with Caries

Professor Sebastian Ciancio, USA
Biological Therapies in Dentistry 2005
"Studies with over 2000 Patients have shown remineralisation of Healozone treated permanent and deciduous occlusal surfaces as well as root caries".
"The HealOzone is a novel new and painless way to treat early caries".

- Amna Al Shamsi
- PhD thesis 2007
- HealOzone significantly reduces caries incidence around orthodontic brackets (9% versus 28%)

Dahrhardt J, Jaeggi T, Lussi A.
Treating open carious lesions in anxious children with Healozone. A prospective controlled clinical study.
American Journal of Dentistry 2006; 19: 267 – 270.

Huth K, Paschos E, Brand and Hickel R.
Effect of Healozone on non cavitated fissure carious lesions in permanent molars. A controlled prospective study.

American Journal of Dentistry 2005; 18: 223 – 270.

Effect of Healozone treatment on different cariogenic microorganisms in vitro.

Swed Dent J 2008;32(3):139-47 (ISSN: 0347-9994)
Fagrell TG; Dietz W; Lingstrom P; Steiniger F; Noren JG

The Use of Ozone in Dentistry and Medicine.
Part 1.

Baysan A and Lynch E.

Primary Dental Care, 12; 2: April 2005, 47 – 52.

- **The use of Ozone in Dentistry and Medicine.**
- **Part 2.**
- **Baysan and Lynch**
- **Primary Dental Care 2006; 13: 37 – 41**

Anti-microbial effects of a novel ozone generating device on micro-organisms associated with root carious lesions

A. Baysan, R. Whiley and E. Lynch
Caries Research 2000;34:498-501.

99% microbial killing achieved after ozone treatment

HealOzone treatment for deep caries or as an alternative to stepwise excavation

Studies in London and Isle of Wight

Reversal of root caries using HealOzone
- A 12 month longitudinal study

A. Baysan (London)

PhD Thesis University of London 2003

Am J Dent 2004; 17: 54 – 60.

- **Baysan A and Lynch E.**
- **91% Reversal of Caries at 5.5 months after Healozone treatment.**
- **99% Reduction in Microorganisms at 5.5 months.**

- **The Root Caries deeper then 2mms did not reverse.**

Gerodontology 2003; 20: 106 – 114.

Clinical reversal of root caries using Healozone, double blind, randomised, controlled 18-month trial.

- **Julian Holmes**
- **100% Reversal of Non Cavitated Root Caries at 18 months**

Antibacterial effect of Healozone on cariogenic bacterial species.

J Dent. 2009 Jun;37(6):449-53

Johansson E Claesson R van Dijken JW

The influence of Healozone on microleakage and fissure penetration of different sealing materials.

Coll Antropol. 2009 Mar;33(1):157-62.

Dukić W, Dukić OL, Milardović S.

Ozone improves lipopolysaccharide-induced responses of an odontoblast-like cell line.

J Endod. 2009 May;35(5):668-72

Noguchi F, Kitamura C, Nagayoshi M, Chen KK, Terashita M, Nishihara T.

The inability of Streptococcus mutans and Lactobacillus acidophilus to form a biofilm in vitro on dentine pretreated with Healozone.

Aust Dent J. 2008 Dec;53(4):349-53

Knight GM, McIntyre JM, Craig GG, Mulyani, Zilm PS.

Treating sensitive cervical areas with Healozone. A prospective controlled clinical trial.

Am J Dent. 2008 Apr;21(2):74-6

Dähnhardt JE, Gygax M, Martignoni B, Suter P, Lussi A.

Skaug N, Strand G, Nielsen O

ORCA & Caries Research 2006

85% Reduction in Mutans Streptococci with HealOzone and 78.6% Reduction in Lactobacilli

Khairul Matin, Junji Tagami

99% Microbial killing with HealOzone

Dept of Restorative Sciences and Cariology Tokyo Medical and Dental University

Professor Michael Noack and Suzanne Kneist

ORCA & Caries Research 2006

99% reduction in microorganisms following 20 seconds of HealOzone treatment

HealOzone treatment for deep caries or as an alternative to stepwise excavation

Studies in London and Isle of Wight

Are Ozone systems safe?

Ozone air levels from a dental ozone gas delivery system

Johansson E, Andersson-Wenckert I, Hagenbjork-Gustafsson A, van Dijken JWV

Acta Odontol Scand. 2007 Nov;65(6):324-330

Conclusion

HealOzone is safe

Assessment of the safety of two ozone delivery devices

Millar BJ, Hodson N.

J Dent. 2007 Mar;35(3):195-200

Conclusion

HealOzone is safe
and
the Ozone system which blows out Ozone is not safe

J Dent Res 86 (5): 451–456, 2007 Huth KC et al. Effect of Aqueous Ozone on the NF-kB System

Ozone exerts inhibitory effects on the NF-kB system suggesting it has an anti-inflammatory capacity.
IkBa proteolysis, cytokine expression and kB-dependent transcription were prevented.

Huth et al.

Effect of ozone on oral cells compared to established antimicrobials.

Eur J Oral Sci 2006; 114: 435 – 440.

Filippi A

The effects of ozone on epithelial wound healing.

Dtsch Zahnarztl Z 2001; 56: 104 – 108.

Research Awards to Ozone researchers

- Dr Dan Mc Kenna
- Proven successful prevention of Peri-implantitis using HealOzone
- Awarded First Prize IADR 2009 (International Association for Dental Research annual meeting)

- Dr Jameela Alawadi
- Proven successful use of HealOzone in root canal therapy
- Awarded First Prize IADR 2008

- Professor Martin Grootveld
- Proven successful management of Dental Unit Water Lines using Ozone
- Awarded First Prize IADR 2007

- Professor Dr Liviu Steier
- Proven successful use of HealOzone and sealing to manage caries
- Awarded First Prize IADR 2006

- Dr Wyman Chan
- Awarded First Prize IADR for his HealOzone research 2005

- Dr Julian Holmes
- Awarded First Prize IADR for his HealOzone research 2004

- Dr Aylin Baysan
- Awarded two First Prizes at IADR

- Dr Layla Abu-Naba'a
- Awarded the prestigious Basil Bibby cariology award at IADR partly for her HealOzone research 2001

- Helene Domingo
- Awarded First Prize IADR for HealOzone research

- Amna Al Shamsi
- PhD thesis 2007
- HealOzone significantly reduces caries incidence around orthodontic brackets (9% versus 28%)

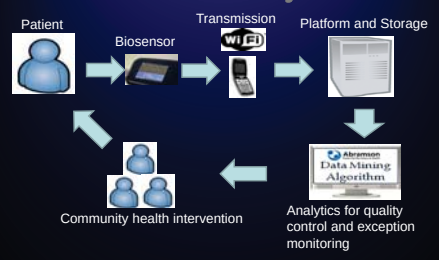
- Ozone therapy in the treatment of avascular bisphosphonate – related jaw osteonecrosis
- Agrillo et al. J Craniofac Surg 2007; 18: 1071 – 1075
- Ozone increased the complete healing of lesions with the disappearance of symptoms and brings lesion progression down to zero. Ozone's "benefits were remarkable".

Objective Quantitative Use of Saliva to Reflect Health or Disease

E Lynch

IADR Symposium 2009

The Blue Scale System



Highlights of the Blue Scale System

1. Low cost implementation
2. Early intervention
3. Technologically innovative
4. Job creation

Future products in the pipeline

Disease	Device	Stage	Funding
Congestive Heart Failure	Blue Scale	Clinical trial complete	
Aortic Aneurysm	Blue Box + Sphygmomanometer	Design completed	DeBakey Center
Asthma	Single Breath Spiromter + mobile phone+video game + social network	Under construction	Challenge Grant (applying)
Diabetes/Metabolic Syndrome	Tunable laser spectrometer & hand held breath detector	Basic science development	Methodist
HIV/AIDS	Medication dispenser/mobile phone/social network	Planned/awaiting funding	Bill & Melinda Gates Foundation (applied)
Buruli Ulcer	Mobile phone camera	Software testing	

ADVANTAGES OF SALIVA AS BIOFLUID MEDIUM FOR DIAGNOSTIC PURPOSES

- Ease of Collection
- Low cost of Collection
- Non-invasive Collection for Patients (reduces *Anxiety* and *Stress*)
- Facilitates Collection of Multiple Samples for Time-Dependent Monitoring Purposes
- Easy to Handle and Deal with

Markers for pregnancy-related disorders, such fetal aneuploidy, preterm birth, preeclampsia, intra-amniotic infection and fetal stress.

MANY OTHER DIAGNOSTIC ANALYTES ('BIOMARKERS') HAVE BEEN SHOWN TO BE PRESENT IN HUMAN SALIVA

For example:

- Steroid Hormones
- HIV Antibody
- Those for Hepatitis A, B and C

Unique diagnostic panels of salivary mRNAs in subjects with Sjögren's disease.

Four salivary mRNAs (OAZ, SAT, IL8, and IL1b) collectively have a discriminatory power of 91% sensitivity and specificity for oral cancer detection.

Recommended Reading

The Axelsson Series on Preventive Dentistry

Ozone – the Revolution in Dentistry. Quintessence Dec 2004

New opinions are always suspected, and usually opposed, without any other reason but because they are not already common

John Locke 1690

Thank you for listening

E.LYNCH@WARWICK.AC.UK

E.LYNCH@WARWICK.AC.UK

See

www.realityesthetics.com

EL103

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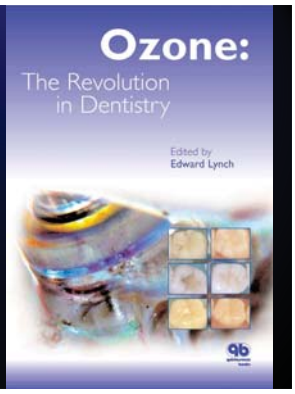

Warwick Dentistry
Advancing Dental Education

Warwick Medical School

E.LYNCH@WARWICK.AC.UK

THE UNIVERSITY OF WARWICK

- Effect of Ozone on Dental Caries Progression
- Seghi et al
- AADR Dallas April 2008
- Ozone significantly (P=0.003) reduced caries progression in experimental rats

- Oxidation of Biomolecules by Ozone
- E Lynch et al
- AADR Dallas April 2008
- Oxidation of Cysteine and Methionine proving Ozone (TherOzone) can combat oral malodour

- Bleaching of compounds responsible for Tooth Discoloration by Ozone
- H Domingo et al
- AADR Dallas 2008
- Ozonated water (TherOzone) bleaches

Han S. Uhm, Kwang H. Lee, and Baik L. Seong.

"Inactivation of H1N1 viruses exposed to acidic ozone water."

Applied Physics Letters 95, 173704 (2009).

Ozone use in RCT, benefits of Ozone for healing, periodontology and safety.

HealOzone is safe

Ozi-cure is not safe

Miller B and Hodson N, Assessment of the safety of two ozone delivery devices. J Dent 2007; 35: 195 – 200.

Ozonated water improves lipopolysaccharide-induced responses of an odontoblast-like cell line.

J Endod. 2009 May;35(5):668-72

Noguchi F Kitamura C Nagayoshi M Chen KK Terashita M Nishihara T

Ozone air levels from a dental ozone gas delivery system

Acta Odontol Scand Nov 2007.

Johansson E, Andersson-Wenckert I, Hagenbjork-Gustafsson A, van Dijken JWV.

HealOzone is safe.

- Wounds receive more Oxygen when Ozonated Water is applied.
- Enhances the phagocitary activity defending cells
- Accelerates migration of epithelial cells
- Activates Fibroblasts
- Increases collagen synthesis
- Improves cell proliferation
- Increases chemotaxis of monocytes and fibroblasts
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85□ Reduction in Mutans Streptococci

78.6□ Reduction in Lactobacilli

Khairul Matin, Junji Tagami

99% Microbial killing with HealOzone

Dept of Restorative Sciences and Cariology
Tokyo Medical and Dental University

Professor Michael Noack and Suzanne Kneist

ORCA & Caries Research 2006

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HealOzone treatment for deep caries or as an alternative to stepwise excavation

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Pyruvic acid → Acetate

Ozone effects the oxidative decarboxylation of pyruvic acid, generating acetate and CO_2 as products

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Ozone uses to clean toothbrushes

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The measurement of root caries for research purposes

Edward Lynch

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Journal of Dental Research 73: 623-629

This is the only validated severity index for root caries

Lynch E. and Beighton D. (1994)

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In: Early Detection of Dental Caries. Ed. Stookey G.K., 195-243

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Antimicrobial management of primary root carious lesions.

Gerodontology 13: 118-129

A pharmaceutical approach to the management of root caries

E. Lynch and A. Baysan

Tissue Preservation and Caries Treatment
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Journal of Inorganic Biochemistry 73: 65-84.

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Multicomponent spectroscopic investigations of antioxidant consumption by an oral preparation containing the stable free radical species chlorine dioxide ($ClO_2^{\bullet}$).

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Antimicrobial management

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Antimicrobial management

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^{1}H NMR Analysis of Microbial-Derived Organic Acids in Primary Root Carious Lesions and Saliva.

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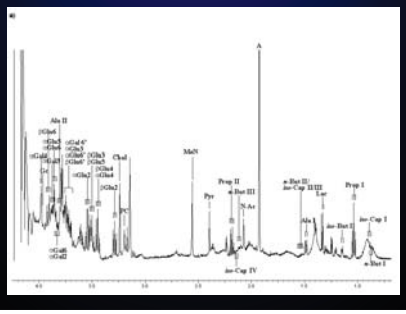
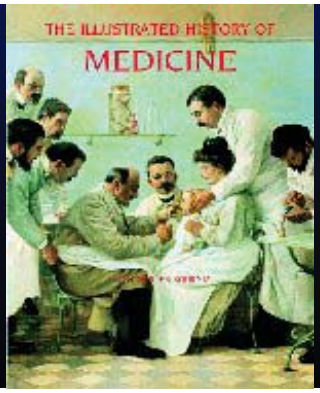


A Pharmaceutical Approach to the Management of Root Caries

Edward Lynch

Professor of Restorative Dentistry and Gerodontology
School of Clinical Dentistry
Queen's University Belfast



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Management of root caries using a dentifrice with a high FLUORIDE content

Reversal of primary root caries using dentifrices containing 5,000 and 1,100 ppm fluoride.

Baysan A, Lynch E, Ellwood R, Davies R, Petersson L, Borsboom P.
Caries Res. 2001;35:41-46.

Reversal of primary root caries using dentifrices containing 5,000 and 1,100 ppm fluoride - 3 month follow-up

Lynch E, Baysan A, Ellwood R, Davies R, Petersson L, Borsboom P.
Amer J Dent 2000;13:218-221.

Management of primary root caries using a dentifrice with a high fluoride content

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Reversal of primary root caries using a dentifrice with a high fluoride content

E. Lynch and A. Baysan
Caries Research

QUEEN MARY
AND WESTFIELD COLLEGE
UNIVERSITY OF LONDON

Root caries remineralisation using 5,000 and 1,100 ppm fluoride dentifrices

A. BAYSAN* and E. LYNCH[1]

The Morita Investigator Award for the Best Clinical Science Presentation from Geriatric Oral Research Group at the International Association of Dental Research in April 2000

Conclusion

The use of dentifrices containing either 5,000 or 1,100 ppm fluoride was associated with the reversal of some of PRCLs.

The use of a dentifrice with a high fluoride content was significantly better to reverse leathery lesions than an 1,100 ppm fluoride dentifrice within 6 months.

QUEEN MARY
AND WESTFIELD COLLEGE
UNIVERSITY OF LONDON

Treatment of cervical sensitivity with a root sealant

A. BAYSAN[1,2]*, E. LYNCH[1], S. BRAILSFORD[3] and D. BEIGHTON[3]

[1]Restorative Dentistry and Gerodontology, Queen's University Belfast, Northern Ireland, [2]Department of Adult Oral Health, St. Bart's and the Royal London School of Medicine and Dentistry, London, UK, [3]Oral Microbiology, Guy's, King's and St. Thomas Dental Institute, London

Dentine sensitivity is one of the most painful and least predictably treated clinical conditions.

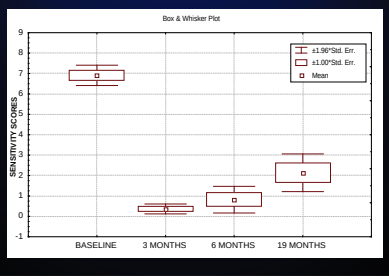
It has been established that dentinal hypersensitivity affects 1 in 6 people. Incidence tends to peak around the third decade of life and is equally divided between men and women.

Aim

The aim of this study was to assess a new protective root sealant for the treatment of cervical sensitivity.

Results

Sensitivity scores at baseline and at time points of 3, 6 and 19 months



Conclusions

There was a significant reduction in sensitivity scores compared to baseline after 19 months.

The protective sealant was found to be capable of covering the cervical surface to prevent further wear.

In addition, there was a significant reduction of some representative caries associated micro-organisms in the overlying plaque.

nderstanding the Results (5 7)

LCD: 51 – 90

LED: 3 yellows (optional)

AUDIO: 2 beeps

OBSERVATION:
Probability of significant carious change beneath the enamel surface warranting specific preventive care.

ADVICE: ***Preventive Care Advised (PCA)***
Strongly consider fluoride varnish or (on pit & fissure sites) pit & fissure sealants, with localized oral hygiene, diet advice and personalised review with monitoring at shorter intervals.

Is Ozone useful for Periodontal Endodontic Lesions?

Cleanability of dental instruments--implications of residual protein and risks from Creutzfeldt-Jakob disease.

alker JT, Dickinson J, Sutton JM, Raven ND, Marsh PD. Br Dent J. 2007 Oct 13;203(7):395-401.

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LIMITED TIME SPECIAL OFFER ON NE HEALOZONE x4

Is Ozone useful for Periodontal Endodontic Lesions?

Professional chemical free cleaning

Cleans better than chemicals; without chemicals

e-cloth *professional* products utilise the highest uality fibres available today.

They neither contain nor use any chemicals, to remove grease, dirt and bacteria from all hard surfaces, using only water.

ser Guide

This information is given as an aid to diagnosis only and the final diagnosis and treatment plan should always be the clinician's decision, also taking into account conventional methods of examination as well as patient risk factors.

Caries Probability		Possible Treatment Options	
High Probability	H (100)	100	Likelihood of Established Dentin Caries Subject to patient profile, minimally invasive operative dentistry may be necessary. Any restoration should be as small as possible.
Medium Probability	M (90–50)	91-99	Intensive Preventive Care Intensive without a **Possibility of established decay extending through the enamel and into superficial dentin.** prophylactic measures **including either fluoride varnish or pit fissure sealants, with or sealant restoration techni ue.**
		51-90	Moderate Preventive Care Usual caries prophylactic measures including fluoride varnish or pit & fissure sealants, with localized oral hygiene, diet advice and personalized review with monitoring at shorter intervals. *Increasing values indicate a need for increasing intensity of preventive care.*
Low Probability	L (50–0)	1-50	Mild Preventive Care Usual caries prophylactic measures including localized oral hygiene advice with use of fluoride toothpaste and review with monitoring over time.
		0	Likelihood of being Sound Continuing surveillance, assessment and review appropriate to the caries risk of the patient.

CARIESCAN PRO™
EXCEED EXPECTATIONS

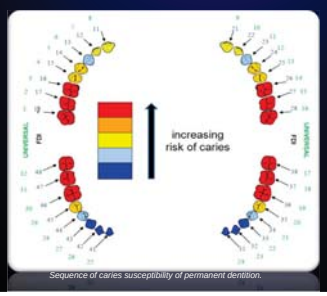
Technical Overview

Contents

- Caries Risk Factors
- The PRO – Overview
- How does it work?
- Product Features
- Benefits to your practice
- Endorsements
- Performance Comparison
- Thank you

High risk teeth

As a general guideline, pits fissures are more susceptible to caries lesion development than approximal sites, which in turn are more susceptible than free smooth sites.



Sequence of caries susceptibility of permanent dentition.

High risk sites

One or more of these fissure types can occur on the same fissure pattern, so it is vital that the clinician uses their knowledge about these different types and their different susceptibilities when examining a tooth for signs of caries lesions.

Shape of fissure		Prevalence %	Increasing risk of caries
	'Bottle-type'	1	
	'I-type'	46	
	'V-type'	39	
	'U-type'	14	

Fissure types, with their respective prevalences and caries susceptibility.

Most susceptible to caries since its base is inaccessible to toothbrush bristles.

Virtually impossible to clean with a toothbrush, hence is at considerable risk

Narrower than the U-type at its base so presents a slightly more challenging fissure pattern to clean.

Readily cleansable, so plaque can be brushed off before it instigates the caries process

The CarieScan PRO

How the PRO works

A small electrical current is passed through the tooth and the response is measured.

Comparison of the response with the applied signal leads to the impedance.

Impedance is an electrical parameter that is directly influenced by the physical properties of the material being studied.

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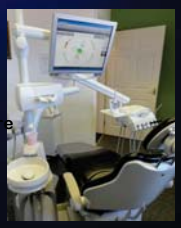
Treatment options

- Dietary Advice
- Oral Hygiene Advice
- Re-mineralising agents
- Great Oral Health products
- Pit Fissure Sealants
- Topical Fluorides and arnishes
- Other agents

Remote iew

- ireless capture of data
- Monitoring feature
- Alternative display option
- eb pdate
- Links to existing practice software
- Included in system price



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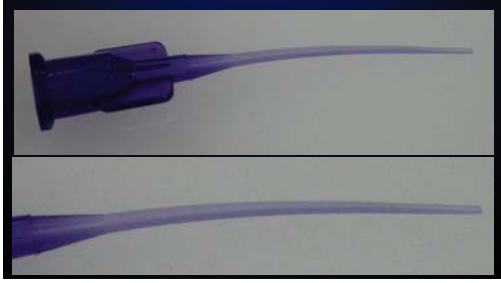
Conclusion

HealOzone is safe



HealOzone treatment of all deep caries. Complete remineralisation.

Leathery pre Ozone + GIC Hard 3 months later