



adha **CLL2016**
93RD ANNUAL SESSION
JUNE 8-14, 2016 / PITTSBURGH, PA

CE Course Handout

More Stats, Facts, Myths and Downright Lies

Thursday, June 9, 2016
2:30-5:30 p.m.



COURSE TITLE: STATS, FACTS, MYTHS, AND DOWNRIGHT LIES – PART II

COURSE INSTRUCTOR: JoAnn R. Gurenlian, RDH, PhD and Ann Eshenaur Spolarich, RDH, PhD

COURSE CREDITS: 3 CEUs

COURSE DATE: June 9, 2016

COURSE DESCRIPTION: Are e-cigarettes safer than cigarettes? Are all fluorides the same? Do patients with prosthetic joint implants require antibiotic pre-medication? Back by popular demand, this course expands upon the opportunity to explore the science behind common beliefs and misperceptions that frame oral health care. Participants will review evidence that supports or refutes current practices and evaluate what constitutes quality evidence. Clinicians will engage in decision-making skills that will define best practices.

LEARNING OBJECTIVES:

Upon completion of this continuing education course, the participant will be able to:

1. Discern fact from fiction in scientific presentations and literature.
2. Identify strategies to determine the extent to which information presented at conferences and through published literature is true or false.
3. Reflect upon the value of dental hygiene publications and continuing education programs.
4. Utilize information in health practice settings to provide current, factual health education and treatment to clients.

*This material is the intellectual property of the authors and may not be reproduced or distributed without their written permission.

Outline:

- I. Cigarette Safety and E-Cigarettes
- II. Gingivitis
 - a. Oral contraceptives and gingivitis
 - b. Treatment of gingivitis
 - c. Professional mechanical plaque removal
 - d. Clinical Practice Guidelines for Nonsurgical Treatment of Chronic Periodontitis by Means of Scaling and Root Planing with or without Adjuncts
- III. Peri-Implant Diseases
- IV. Probiotics and Oral Health
- V. There's an App for That
- VI. Antibiotic Premedication
- VII. Using Evidence to Select an Intervention
 - a. Interpreting methodology
 - b. Interpreting graphically-depicted data
 - c. Benefit versus Harm
- VIII. Conclusions, Questions and Answers

Selected References:

Cigarette Safety

Source: National Cancer Institute. Risks associated with smoking cigarettes with low machine-measured yields of tar and nicotine. Smoking and Tobacco Control Monograph 13. Bethesda, MD: NCI 2001.

Electronic Cigarettes

El-Hellani A, El-Hage R, Baalbaki R, Salman R, et al. Free-base and protonated nicotine in electronic cigarette liquids and aerosols. *Chemical Research in Toxicology*. 2015; 150722092548000 doi:10.1021/acs.chemirestox.5b00107.

Bam TS, Bellew W, Berezhnova I, Jackson-Morris A, Jones A, Latif E, Molinari MA, Quan G, Singh RJ, Wisotzky M. Position statement on electronic cigarettes or electronic nicotine delivery systems. Tobacco Control Department International Union Against Tuberculosis and Lung Disease. *Int J Tuberc Lung Dis*. 2014 Jan;18(1):5-7.

Canadian Agency for Drugs and Technologies in Health. Electronic Cigarettes: A Review of the Clinical Evidence and Safety, 13 August 2012. Accessed November 2, 2105. <https://www.cadth.ca/media/pdf/htis/aug-2012/RC0380%20E-cigarettes%20Final.pdf>

Rahman MA1, Hann N2, Wilson A3, Mnatzaganian G4, Worrall-Carter L5. E-cigarettes and smoking cessation: evidence from a systematic review and meta-analysis. *PLoS One*. 2015 Mar 30;10(3):e0122544. doi: 10.1371/journal.pone.0122544. eCollection 2015.

Schraufnagel DE, Blasi F, Drummond MB, Lam DC, Latif E, Rosen MJ, Sansores R, Van Zyl-Smit R. Electronic cigarettes. A position statement of the forum of international respiratory societies. *Am J Respir Crit Care Med*. 2014 Sep 15;190(6):611-8. doi: 10.1164/rccm.201407-1198PP. PMID: 25006874

McRobbie H, Bullen C, Hartmann-Boyce J, Hajek P Can electronic cigarettes help people stop smoking or reduce the amount they smoke, and are they safe to use for this purpose? 17 December 2014. Available at: http://www.cochrane.org/CD010216/TOBACCO_can-electronic-cigarettes-help-people-stop-smoking-or-reduce-the-amount-they-smoke-and-are-they-safe-to-use-for-this-purpose

Oral Contraceptives and Gingivitis

Preshaw, PM. Oral contraceptives and the periodontium. *Periodontology* 2000 2013;61:125-159.

Preshaw, PM, Knutsen, MA, Mariotti, A. Experimental gingivitis in women using oral contraceptives. *J Dent Res* 2001;80:2011-2015.

Taichman, LS, Eklund SA. Oral contraceptives and periodontal diseases: rethinking the association based upon analysis of National Health and Nutrition Examination Survey data. *J Periodontol* 2005;76:1374-1385.

Treatment of Gingivitis

Chapple ILC, Van der Weijden F, Doerfer C, Herrera D, et al. Primary prevention of periodontitis:managing gingivitis. *J Clin Periodontol*. 2015;42 (Suppl.16): S71-S76.

Polak D, Martin C, Sanz-Sánchez I, Beyth N, Shapira L. Are anti-inflammatory agents effective in treating gingivitis as solo or adjunctive therapies? A systematic review. *J Clin Periodontol*. 2015;42(Suppl.16):S139-S151.

Serrano J, Escribano M, Roldán S, Martín C, Herrera D. Efficacy of adjunctive anti-plaque chemical agents in managing gingivitis: a systematic review and meta-analysis. *J Clin Periodontol*. 2015;42(Suppl.16):S106-S138.

Professional Mechanical Plaque Removal

Sanz M, Bäumer A, Buduneli N, Dommisch H, et al. Effect of professional mechanical plaque removal on secondary prevention of periodontitis and the complications of gingival and periodontal preventive measures – Consensus report of group 4 of the 11th European workshop on periodontology on effective prevention of periodontal and peri-implant disease. *J Clin Periodontol* 2015;42(Suppl. 16): S214-S220.

Needleman I, Nibali L, Di Iorio A. Professional mechanical plaque removal for prevention of periodontal diseases in adults—systematic review update. *J Clin Periodontol* 2015;42(Suppl. 16): S12-S35.

Clinical Practice Guidelines for Nonsurgical Treatment of Chronic Periodontitis by Means of Scaling and Root Planing with or without Adjuncts

Smiley CJ, Tracy SL, Abt E, Michalowicz BS, John MT, Gunsolley J, Cobb CM, Rossmann J, Harrel SK, Forrest JL, Hujoel PP, Noraian KW, Greenwell H, Frantsve-Hawley J, Estrich C, Hanson N. Evidence-based clinical practice guideline on the nonsurgical treatment of chronic periodontitis by means of scaling and root planing with or without adjuncts. *J Am Dent Assoc*. 2015 Jul;146(7):525-35.

Smiley CJ, Tracy SL, Abt E, Michalowicz BS, John MT, Gunsolley J, Cobb CM, Rossmann J, Harrel SK, Forrest JL, Hujoel PP, Noraian KW, Greenwell H, Frantsve-Hawley J, Estrich C, Hanson N. Systematic review and meta-analysis on the nonsurgical treatment of chronic periodontitis by means of scaling and root planing with or without adjuncts. *J Am Dent Assoc*. 2015 Jul;146(7):508-24.e5.

Peri-Implant Diseases

Jepsen S, Berglundh T, Genco R, Aass Am, et al. Primary prevention of peri-implantitis: Managing peri-implant mucositis. *J Clin Periodontol* 2015: 42(Suppl.16): S152-S157. doi: 10.1111/jcpe.12369.

Renvert S, Polyzois I. Risk indicators for peri-implant mucositis: a systematic literature review. *J Clin Periodontol* 2015: 42 (Suppl 16): S127-S186. doi:10.1111/jcpe.12346.

Salci GE, Ramseier CA. Efficacy of patient-administered mechanical and/or chemical plaque control protocols in the management of peri-implant mucositis. A systematic review. *J Clin Periodontol* 2015; 42(Suppl.16): S187-S201. doi:10.1111/jcpe.12321.

Schwarz F, Becker K, Sager M. Efficacy of professionally administered plaque removal with or without adjunctive measures for the treatment of peri-implant mucositis. A systematic review and meta-analysis. *J Clin Periodontol* 2015; 42 (Suppl 16.):S202-S213. doi:10.1111/jcpe.12349.

Tonetti MS, Eickholz P, Loos BG, Papapanou P, et al. Principles in prevention of periodontal diseases—Consensus report of group 1 of the 11th European workshop on periodontology on effective prevention of periodontal and peri-implant diseases. *J Clin Periodontol* 2015;42 (Suppl.16): S5-S11. doi:10.1111/jcpe.12368.

Van Velzen FJ, Lang NP, Schulten EA, Ten Bruggenkate CM. Dental floss as a possible risk for the development of peri-implant disease: an observational study of 10 cases. *Clin Oral Implants Res.* 2015 Aug 11. doi: 10.1111/clr.12650.

Probiotics and Oral Health

Reddy RS, Swapna LA, Ramesh T, Rajesh Singh T, Vijayalaxmi N, Lavanya R. Bacteria in oral health- probiotics and prebiotics a review. *Int J Biol Med Res.* 2011;2(4):1226-1233.

Pradeep K, Kuttappa MA, Prasana KR. Probiotics and oral health: an update. *SADJ.* 2014 Feb;69(1):20-4.

Twetman S, Keller MK. Probiotics for caries prevention and control. *Adv Dent Res.* 2012;28(2):98-102.

Bowen DM. Probiotics and oral health. *J Dent Hyg.* February 2013;87(1):5-9.

There's an App for That

Underwood B, Birdsall J, Kay E. The use of a mobile app to motivate evidence-based oral hygiene behaviour. *Br Dent J.* 2015 Aug 28;219(4):E2.

Antibiotic Premedication

Oliver R, Roberts GJ, Hooper L, Worthington HV. Antibiotics for the prophylaxis of bacterial endocarditis in dentistry. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD003813. DOI: 10.1002/14651858.CD003813.pub3

Steckelberg JM, Wilson WR. Risk factors for infective endocarditis. Infect Dis Clin North Am. 1993 Mar;7(1):9-19.

Thornhill MH, Dayer MJ, Forde JM, Corey GR, Chu VH, Couper DJ, Lockhart PB. Impact of the NICE guideline recommending cessation of antibiotic prophylaxis for prevention of infective endocarditis: before and after study. BMJ. 2011 May 3;342:d2392. doi: 10.1136/bmj.d2392.

Wilson W, et al. Prevention of infective endocarditis: Guidelines from the American Heart Association: A guideline from the American Heart Association Rheumatic Fever, Endocarditis and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group. JADA 2008;139:3-24.

AAOS/ADA. Prevention of orthopaedic implant infection in patients undergoing dental procedures. Evidence-based guideline and evidence report. Available at: http://www.ada.org/sections/professionalResources/pdfs/PUDP_guideline.pdf

Rethman MP, Watters W, Abt E, et al. Prevention of orthopaedic implant infection in patients undergoing dental procedures. Executive summary on the AAOS/ADA clinical practice guideline. Available at: <http://www.ada.org/sections/professionalResources/pdfs/dentalexecsumm.pdf>

Gomez EO, Osmon DR, Barbari EF. Do patients with prosthetic joints require dental antimicrobial prophylaxis? Clev Clin J Med Jan 2011;78(1):36-38.

Deacon JM, Pagliaro AJ, Zelicof SB, Horowitz HW. Prophylactic use of antibiotics for procedures after total joint replacement. Bone Joint Surg Am 1996;78:1755-1770.

Waldman BJ, Mont MA, Hungerford DS. Total knee arthroplasty infections associated with dental procedures. Clin Orthop Relat Res 1997;343:164-172.

Waldman BJ, Mont MA, Hungerford DS. Total knee arthroplasty infections associated with dental procedures. Clin Orthop Relat Res 1997;343:164-172.

LaPorte DM, Waldman BJ, Mont MA, Hungerford DS. Infections associated with dental procedures in total hip arthroplasty. J Bone Joint Surg Br 1999;81:56-59.

Berberi EF, Osmon DR, Carr A, et al. Dental procedures as risk factors for prosthetic hip or knee infections: a hospital-based prospective case-control study. *Clin Infect Dis* 2010;50:8-16

ADA/AAOS. Prevention of Orthopedic Implant Infection in Patients Undergoing Dental Procedures: Evidence-Based Guideline and Evidence Report. 2012. Available at: http://www.ada.org/sections/professionalResources/pdfs/PUDP_guideline.pdf

Sollecito TP, Abt E, Lockhart PB, Truelove E, Paumier TM, Tracy SL, Tampi M, Beltrán-Aguilar ED, Frantsve-Hawley J. The use of prophylactic antibiotics prior to dental procedures in patients with prosthetic joints: Evidence-based clinical practice guideline for dental practitioners – a report of the American Dental Association Council on Scientific Affairs. *JADA* 2015;146(1):11-16.

Berberi EF, Osmon DR, Carr A, et al. Dental procedures as risk factors for prosthetic hip or knee infections: a hospital-based prospective case-control study. *Clin Infect Dis* 2010;50:8-16

Skaar DD, O'Connor H, Hodges JS, Michalowicz BS. Dental procedures and subsequent prosthetic joint infections: findings from the Medicare Current Beneficiary Survey. *JADA* 2011;142(12):1343-1351.

Swan J, Dowsey M, Babazadeh D, Mandaleson A, Choong PF. Significance of sentinel infective events in haematogenous prosthetic knee infections. *ANZ J Surg* 2011;81(1-2):40-45.

Jacobson JJ, Millard HD, Plezia R, Blankenship JR. Dental treatment and late prosthetic joint infections. *Oral Surg Oral Med Oral Pathol* 1986;61(4):413-417.

Interpreting Methodology

Goyal CR, Lyle DM, Qaqish JG, Schuller R. Efficacy of Two Interdental Cleaning Devices on Clinical Signs of Inflammation: A Four-Week Randomized Controlled Trial. *J Clin Dent*. 2015;26(2):55-60.

Interpreting Graphically-Depicted Data

Sharma N, Charles CH, Lynch MC, Qaqish J, McGuire JA, Galustians JG, Kumar LD. Adjunctive benefit of an essential oil-containing mouthrinse in reducing plaque and gingivitis in patients who brush and floss regularly: a six-month study. *J Am Dent Assoc*. 2004 Apr;135(4):496-504.

Benefits vs. Harms (Triclosan safety)

Riley P, Lamont T. Triclosan/copolymer containing toothpastes for oral health. Cochrane Database Syst Rev. 2013 Dec 5;12:CD010514. doi:10.1002/14651858.CD010514.pub2. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010514.pub2/abstract;jessionid=217E52E32B87ADA7C2AD66C3244DFF12.f01t03>.

Rodricks JV, Swenberg JA, Borzelleca JF, Maronpot RR, Shipp AM. Triclosan: a critical review of the experimental data and development of margins of safety for consumer products. Crit Rev Toxicol. 2010 May;40(5):422-84.

Cullinan MP, Palmer JE, Carle AD, West MJ, Seymour GJ. Long term use of triclosan toothpaste and thyroid function. Sci Total Environ. 2012 Feb 1;416:75-9. doi: 10.1016/j.scitotenv.2011.11.063.

Cullinan MP, Bird PS, Heng NC, West MJ, Seymour GJ. No evidence of triclosan-resistant bacteria following long-term use of triclosan-containing toothpaste. J Periodontal Res. 2013 May 14. doi: 10.1111/jre.12098.

Panagakos FS, Volpe AR, Petrone ME, DeVizio W, Davies RM, Proskin HM. Advanced oral antibacterial/anti-inflammatory technology: A comprehensive review of the clinical benefits of a triclosan/copolymer/fluoride dentifrice. J Clin Dent. 2005;16 Suppl:S1-19.

Niederman R. Triclosan-containing toothpastes reduce plaque and gingivitis. Evid Based Dent. 2005;6(2):33.