

Evidence-Based Dentistry: A Paradigm Shift

Learning Objectives:

1. To learn how to use evidence-based science to guide treatment decisions and improve clinical outcomes.
2. To learn how to find reliable information quickly using on-line scientific databases.
3. To learn how to communicate scientific evidence to your patients.

Resources for Scientific Information:

1. **Pub Med** comprises over 27 million citations for biomedical literature from MEDLINE, life science journals, and online books. Pub Med is a free resource that is maintained by the National Center for Biotechnology Information at the U.S. National Library of Medicine located at the National Institutes of Health and is available at <http://www.ncbi.nlm.nih.gov/pubmed/>
2. The **American Dental Association Evidence-Based Dentistry** website is an on-line data base of systematic reviews, critical summaries, clinical recommendations, and plain language summaries available at www.ebd.ada.org
3. **Cochrane Library** is a database of systematic reviews and meta-analysis in medicine and healthcare specialties and makes the results of well-controlled trials readily available and is available at <http://www.ncbi.nlm.nih.gov/pubmed/>
4. **Trip Database** is a clinical search engine to help clinicians identify the best available evidence to answer a specific clinical question. It provides access to systematic reviews, randomized clinical trials, and other content type including patient information leaflets and is available at <http://www.tripdatabase.com/>

Key Concluding Points:

1. Evidence-Based Dentistry is an **approach** to oral health care that integrates the best scientific evidence to guide clinical decision-making in dentistry.
2. Evidence-Based Dentistry allows you to find **reliable** information to your clinical questions quickly and efficiently.
3. Evidence-Based Dentistry will allow you to **improve** clinical outcomes.
4. Evidence-Based Dentistry will improve the profession and reputation of dentistry by replacing myths and opinions with **sound scientific information**.
5. Evidence-Based Dentistry helps to **close the “gap”** between clinical practice **behaviors** and evidence-based **recommendations**.

References Cited:

Prophylactic Removal of Third Molars:

Adeyemo WL. Do pathologies associated with impacted lower third molars justify prophylactic removal? A critical review of the literature. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2006;102(4) 448-452.

Al-Balkhi KM. The effect of different third molar conditions on the re-crowding of lower anterior teeth in the absence of tight interproximal contacts one-year post orthodontic treatment: a pilot study. *J Contemp Dent Pract.* 2004; 5(3): 66-73.

Flick WG. The third molar controversy: framing the controversy as a public policy issue. *J Oral Maxillofac Surg.* 1999; 75(4); 438-444.

Friedman JW. The prophylactic extraction of third molars: a public health hazard. *Am J Public Health.* 2007; 97(9): 1554-1559.

Prophylactic Removal of Third Molars, continued:

Mettes TJ, Nienhuijs ME, van der Sanden WJ, Verdonschot EH, Plasschaert AJ. Interventions for treating asymptomatic impacted wisdom teeth in adolescents and adults. *Cochrane Database Syst Rev.* 2012;6.

Stanley HR, Alatter M, Collett WK, Stringfellow HR, Spiegel EH. Pathological sequelae of “neglected” impacted third molars. *J Oral Pathol.* 1988;17:113-117.

Song F, Landes DP, Glenny AM, Sheldon TA. Prophylactic removal of impacted third molars: an assesment of published reviews. *British Dental Journal.* 1997; 182(9): 339-346.

Use of Tetracycline in treating chronic periodontitis

Pavia M, Nobile CG, Angelillo IF. Meta-analysis of local tetracycline in treating chronic periodontitis. *J Periodontol.* 2003;74(6):916-932.

Use of chlorhexidine gel to prevent alveolar osteitis:

Haraji A, Rakhshan V, Khamverdi N, Alishahi HK. Effects of intra-alveolar placement of 0.2% chlorhexidine bioadhesive gel on dry socket incidence and post-surgical pain: a double-blind split mouth randomized controlled clinical trial. *J Orofac Pain.* 2013;27(3): 256-263.

Use of prophylactic antibiotics to decrease post-op infections:

Lodi G, Figini L, Carrassi A, Del Fabbro M, Furness S. Antibiotics to prevent complications following tooth extractions, *Cochrane Database Syst Rev.* 2012

Best timing of implant placement: Early vs. Delayed:

Schropp L., Wenzel A, Stavropoulos A. Early, delayed, or late single implant placement: 10 year results from a randomized controlled clinical trial. Clin Oral Implants Res, 2014;25(12).

Relative analgesic efficacy of oral analgesics:

Denisco RC, Kenna GA, O'Neil MG, Kulich RJ, Moore PA, Kane WT, Mehta NR, Hersh EV and Katz NP. Prevention of prescription opioid abuse: The role of the dentist. J Am Dent Assoc. 2011;142(7):800-810.

Moore PA and Hersh EV. Combining ibuprofen and acetaminophen for acute pain management after third molar extractions: Translating clinical research to dental practice. J Am Dent Assoc. 2013;144(8):898-908.

CDC, Morbidity and mortality weekly report. 60(47):1489, 2011.