



Endodontics II

Year 4 — Bachelor of Dental Surgery

Reference and Resource List — Chapters 2.1 to 2.15

Supporting the MCQ, SBA, SAQ and flashcard question bank

BM Education FZE

Disclaimer

Questions in this bank were generated with the assistance of artificial intelligence and reviewed against the references listed. They are provided for educational revision only, are not a substitute for prescribed textbooks, clinical guidelines or supervised clinical training, and no warranty is given as to their accuracy or completeness.

References are presented in Vancouver style. Part 1 lists the core sources that apply across the whole subject; Part 2 lists, for each chapter, the relevant sections of those core texts together with sources specific to that chapter. Numbers in square brackets in Part 2 refer to the core list in Part 1.

PART 1 — CORE REFERENCES (ALL CHAPTERS)

1.1 Principal endodontic textbooks

1. Berman LH, Hargreaves KM, editors. *Cohen's Pathways of the Pulp*. 12th ed. St Louis: Elsevier; 2021.
2. Torabinejad M, Fouad AF, Shabahang S. *Endodontics: Principles and Practice*. 6th ed. St Louis: Elsevier; 2021.
3. Chong BS, editor. *Harty's Endodontics in Clinical Practice*. 7th ed. Edinburgh: Elsevier; 2017.
4. Patel S, Barnes JJ, editors. *The Principles of Endodontics*. 3rd ed. Oxford: Oxford University Press; 2019.
5. Gopikrishna V, editor. *Grossman's Endodontic Practice*. 14th ed. Gurugram: Wolters Kluwer; 2021.
6. Rotstein I, Ingle JI, editors. *Ingle's Endodontics*. 7th ed. Raleigh (NC): PMPH-USA; 2019.
7. Ørstavik D, editor. *Essential Endodontology: Prevention and Treatment of Apical Periodontitis*. 3rd ed. Hoboken (NJ): Wiley Blackwell; 2020.

1.2 Supporting biology, microbiology and anatomy

8. Hargreaves KM, Goodis HE, Tay FR, editors. *Seltzer and Bender's Dental Pulp*. 2nd ed. Chicago: Quintessence Publishing; 2012.
9. Nanci A. *Ten Cate's Oral Histology: Development, Structure, and Function*. 10th ed. St Louis: Elsevier; 2024.
10. Siqueira JF Jr. *Treatment of Endodontic Infections*. London: Quintessence Publishing; 2011.
11. Ricucci D, Siqueira JF Jr. *Endodontology: An Integrated Biological and Clinical View*. London: Quintessence Publishing; 2013.
12. Versiani MA, Basrani B, Sousa-Neto MD, editors. *The Root Canal Anatomy in Permanent Dentition*. Cham: Springer; 2019.

1.3 Restorative, radiology, irrigation and pharmacology interface

13. Ritter AV, Boushell LW, Walter R, editors. *Sturdevant's Art and Science of Operative Dentistry*. 7th ed. St Louis: Elsevier; 2019.
14. Rosenstiel SF, Land MF, Fujimoto J. *Contemporary Fixed Prosthodontics*. 5th ed. St Louis: Elsevier; 2016.
15. Whaites E, Drage N. *Essentials of Dental Radiography and Radiology*. 6th ed. Edinburgh: Elsevier; 2021.
16. Basrani B, editor. *Endodontic Irrigation: Chemical Disinfection of the Root Canal System*. Cham: Springer; 2015.
17. Malamed SF. *Handbook of Local Anesthesia*. 7th ed. St Louis: Elsevier; 2020.

1.4 Terminology, diagnostic and quality standards

18. American Association of Endodontists. *Glossary of Endodontic Terms*. 10th ed. Chicago: AAE; 2020. Available from: <https://www.aae.org>
19. American Association of Endodontists. AAE Consensus Conference recommended diagnostic terminology. *J Endod*. 2009;35(12):1634.
20. European Society of Endodontology. Quality guidelines for endodontic treatment: consensus report of the European Society of Endodontology. *Int Endod J*. 2006;39(12):921–30.
21. Duncan HF, Kirkevang LL, Peters OA, El-Karim I, Krastl G, Del Fabbro M, et al. Treatment of pulpal and apical disease: the European Society of Endodontology (ESE) S3-level clinical practice guideline. *Int Endod J*. 2023;56 Suppl 3:238–95.
22. American Association of Endodontists. Endodontic case difficulty assessment form and guidelines. Chicago: AAE. Available from: <https://www.aae.org>

1.5 Guidelines, regulatory and educational sources

23. Patel S, Brown J, Semper M, Abella F, Mannocci F. European Society of Endodontology position statement: use of cone beam computed tomography in endodontics. *Int Endod J*. 2019;52(12):1675–8.
24. Special Committee to Revise the Joint AAE/AAOMR Position Statement on use of CBCT in Endodontics. AAE and AAOMR joint position statement: use of cone beam computed tomography in endodontics 2015 update. *J Endod*. 2015;41(9):1393–6.
25. Horner K, Eaton KA, editors. *Selection criteria for dental radiography*. 3rd ed. London: Faculty of General Dental Practice (UK); 2013.
26. Scottish Dental Clinical Effectiveness Programme. *Drug prescribing for dentistry: dental clinical guidance*. 3rd ed. Dundee: SDCEP; 2016. Available from: <https://www.sdcep.org.uk>

27. Segura-Egea JJ, Gould K, Şen BH, Jonasson P, Cotti E, Mazzone A, et al. European Society of Endodontology position statement: the use of antibiotics in endodontics. *Int Endod J*. 2018;51(1):20–5.
28. Kohn WG, Collins AS, Cleveland JL, Harte JA, Eklund KJ, Malvitz DM. Guidelines for infection control in dental health-care settings – 2003. *MMWR Recomm Rep*. 2003;52(RR-17):1–61.
29. Department of Health. Health Technical Memorandum 01-05: decontamination in primary care dental practices. London: DH; 2013. Available from: <https://www.gov.uk>
30. De Moor RJG, Hülsmann M, Kirkevang LL, Tanalp J, Whitworth J. Undergraduate curriculum guidelines for endodontology. *Int Endod J*. 2013;46(12):1105–14.
31. Field JC, Cowpe JG, Walmsley AD. The graduating European dentist: a new undergraduate curriculum framework. *Eur J Dent Educ*. 2017;21 Suppl 1:2–10.
32. General Dental Council. Preparing for practice: dental team learning outcomes for registration. London: GDC; 2015. Available from: <https://www.gdc-uk.org>
33. Dental Council of India. Bachelor of Dental Surgery (BDS) Course Regulations, 2007 (as amended). New Delhi: DCI.

1.6 Key journals for currency

International Endodontic Journal • Journal of Endodontics • Australian Endodontic Journal • Endodontic Topics • Dental Traumatology • Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology • Clinical Oral Investigations • Journal of Prosthetic Dentistry • Journal of Dentistry • British Dental Journal • European Journal of Dental Education

PART 2 — CHAPTER-SPECIFIC REFERENCES

Chapter 2.1 — Foundations of Contemporary Endodontics (Clinical UG Level)

2.1.1 Scope and objectives of Endodontics II · 2.1.2 Pulp–periapical biology (applied) · 2.1.3 Endodontic microbiology (clinical relevance)

Core texts: [1] Chs. on pulp biology, apical periodontitis, microbiology and outcomes · [2] Introductory chapters · [4] Chs. 1–2 (Introduction; Life of a tooth) · [7] · [8] · [10] · [11]

Additional

- Kakehashi S, Stanley HR, Fitzgerald RJ. The effects of surgical exposures of dental pulps in germ-free and conventional laboratory rats. *Oral Surg Oral Med Oral Pathol.* 1965;20:340–9.
- Möller AJR, Fabricius L, Dahlén G, Öhman AE, Heyden G. Influence on periapical tissues of indigenous oral bacteria and necrotic pulp tissue in monkeys. *Scand J Dent Res.* 1981;89(6):475–84.
- Nair PNR. Pathogenesis of apical periodontitis and the causes of endodontic failures. *Crit Rev Oral Biol Med.* 2004;15(6):348–81.
- Ricucci D, Siqueira JF Jr. Biofilms and apical periodontitis: study of prevalence and association with clinical and histopathologic findings. *J Endod.* 2010;36(8):1277–88.
- Siqueira JF Jr, Rôças IN. Clinical implications and microbiology of bacterial persistence after treatment procedures. *J Endod.* 2008;34(11):1291–1301.e3.
- Ørstavik D, Kerekes K, Eriksen HM. The periapical index: a scoring system for radiographic assessment of apical periodontitis. *Endod Dent Traumatol.* 1986;2(1):20–34.
- Ng YL, Mann V, Rahbaran S, Lewsey J, Gulabivala K. Outcome of primary root canal treatment: systematic review of the literature – part 1. Effects of study characteristics on probability of success. *Int Endod J.* 2007;40(12):921–39.

Chapter 2.2 — Diagnosis, Case Assessment and Treatment Planning

2.2.1 History and symptom analysis · 2.2.2 Clinical examination · 2.2.3 Pulp sensibility and special tests · 2.2.4 Radiographic assessment · 2.2.5 Diagnosis (pulpal, apical, previously treated) · 2.2.6 Treatment planning and decision-making

Core texts: [1] Chs. on diagnosis, case assessment and treatment planning, and radiographic interpretation · [3] Ch. on diagnosis · [4] Ch. 3 (Diagnosis, treatment planning and patient management) · [5] · [15] · [18]–[19] · [22]–[25] · [27]

Additional

- Levin LG, Law AS, Holland GR, Abbott PV, Roda RS. Identify and define all diagnostic terms for pulpal health and disease states. *J Endod.* 2009;35(12):1645–57.
- Abbott PV. Classification, diagnosis and clinical manifestations of apical periodontitis. *Endod Topics.* 2004;8(1):36–54.
- Dummer PMH, Hicks R, Huws D. Clinical signs and symptoms in pulp disease. *Int Endod J.* 1980;13(1):27–35.
- Petersson K, Söderström C, Kiani-Anaraki M, Lévy G. Evaluation of the ability of thermal and electrical tests to register pulp vitality. *Endod Dent Traumatol.* 1999;15(3):127–31.
- Mejäre IA, Axelsson S, Davidson T, Frisk F, Hakeberg M, Kvist T, et al. Diagnosis of the condition of the dental pulp: a systematic review. *Int Endod J.* 2012;45(7):597–613.
- Alghaithy RA, Qualtrough AJE. Pulp sensibility and vitality tests for diagnosing pulpal health in permanent teeth: a critical review. *Int Endod J.* 2017;50(2):135–42.
- Patel S, Dawood A, Pitt Ford T, Whaites E. The potential applications of cone beam computed tomography in the management of endodontic problems. *Int Endod J.* 2007;40(10):818–30.

Chapter 2.3 — Endodontic Armamentarium, Setup and Asepsis

2.3.1 Operatory setup · 2.3.2 Rubber dam and isolation · 2.3.3 Magnification and illumination · 2.3.4 Endodontic instruments overview

Core texts: [1] Chs. on armamentarium, isolation and cleaning and shaping instruments · [2] · [3] · [5] · [28] · [29]

Additional

- Ahmad IA. Rubber dam usage for endodontic treatment: a review. *Int Endod J.* 2009;42(11):963–72.
- Lin PY, Huang SH, Chang HJ, Chi LY. The effect of rubber dam usage on the survival rate of teeth receiving initial root canal treatment: a nationwide population-based study. *J Endod.* 2014;40(11):1733–7.
- Carrotte P. Endodontics: part 6. Rubber dam and access cavities. *Br Dent J.* 2004;197(9):527–34.

- Ng YL, Spratt D, Sriskantharajah S, Gulabivala K. Evaluation of protocols for field decontamination before bacterial sampling of root canals for contemporary microbiology techniques. *J Endod.* 2003;29(5):317–20.
- Carr GB, Murgel CAF. The use of the operating microscope in endodontics. *Dent Clin North Am.* 2010;54(2):191–214.
- Del Fabbro M, Taschieri S, Lodi G, Banfi G, Weinstein RL. Magnification devices for endodontic therapy. *Cochrane Database Syst Rev.* 2015;(12):CD005969.
- Kim S. Modern endodontic practice: instruments and techniques. *Dent Clin North Am.* 2004;48(1):1–9.
- Zupanc J, Vahdat-Pajouh N, Schäfer E. New thermomechanically treated NiTi alloys – a review. *Int Endod J.* 2018;51(10):1088–103.

Chapter 2.4 — Root Canal Anatomy and Access Cavity (Advanced UG)

2.4.1 Internal and external anatomy · 2.4.2 Access cavity principles · 2.4.3 Tooth-specific access outlines · 2.4.4 Pulp chamber and canal orifice location

Core texts: [1] Chs. on tooth morphology, isolation and access cavity preparation · [2] · [4] · [5] · [12] · [15]

Additional

- Vertucci FJ. Root canal anatomy of the human permanent teeth. *Oral Surg Oral Med Oral Pathol.* 1984;58(5):589–99.
- Vertucci FJ. Root canal morphology and its relationship to endodontic procedures. *Endod Topics.* 2005;10(1):3–29.
- Ahmed HMA, Versiani MA, De-Deus G, Dummer PMH. A new system for classifying root and root canal morphology. *Int Endod J.* 2017;50(8):761–70.
- Krasner P, Rankow HJ. Anatomy of the pulp-chamber floor. *J Endod.* 2004;30(1):5–16.
- Cleghorn BM, Christie WH, Dong CCS. Root and root canal morphology of the human permanent maxillary first molar: a literature review. *J Endod.* 2006;32(9):813–21.
- de Pablo OV, Estevez R, Péix Sánchez M, Heilborn C, Cohenca N. Root anatomy and canal configuration of the permanent mandibular first molar: a systematic review. *J Endod.* 2010;36(12):1919–31.
- Pomeranz HH, Eidelman DL, Goldberg MG. Treatment considerations of the middle mesial canal of mandibular first and second molars. *J Endod.* 1981;7(12):565–8.
- Fan B, Cheung GSP, Fan M, Gutmann JL, Bian Z. C-shaped canal system in mandibular second molars: part I – anatomical features. *J Endod.* 2004;30(12):899–903.
- Patel S, Rhodes J. A practical guide to endodontic access cavity preparation in molar teeth. *Br Dent J.* 2007;203(3):133–40.
- Clark D, Khademi J. Modern molar endodontic access and directed dentin conservation. *Dent Clin North Am.* 2010;54(2):249–73.

Chapter 2.5 — Working Length Determination and Glide Path

2.5.1 Working length concepts · 2.5.2 Apex locators · 2.5.3 Radiographic working length · 2.5.4 Glide path establishment

Core texts: [1] Ch. on cleaning and shaping (working length and glide path sections) · [2] · [3] · [5] · [15]

Additional

- Kuttler Y. Microscopic investigation of root apices. *J Am Dent Assoc.* 1955;50(5):544–52.
- Dummer PMH, McGinn JH, Rees DG. The position and topography of the apical canal constriction and apical foramen. *Int Endod J.* 1984;17(4):192–8.
- Ricucci D. Apical limit of root canal instrumentation and obturation, part 1: literature review. *Int Endod J.* 1998;31(6):384–93.
- Sjögren U, Hägglund B, Sundqvist G, Wing K. Factors affecting the long-term results of endodontic treatment. *J Endod.* 1990;16(10):498–504.
- Nekoofar MH, Ghandi MM, Hayes SJ, Dummer PMH. The fundamental operating principles of electronic root canal length measurement devices. *Int Endod J.* 2006;39(8):595–609.
- Gordon MPJ, Chandler NP. Electronic apex locators. *Int Endod J.* 2004;37(7):425–37.
- Kim E, Lee SJ. Electronic apex locator. *Dent Clin North Am.* 2004;48(1):35–54.
- Patiño PV, Biedma BM, Liébana CR, Cantatore G, Bahillo JG. The influence of a manual glide path on the separation rate of NiTi rotary instruments. *J Endod.* 2005;31(2):114–16.
- Berutti E, Negro AR, Lendini M, Pasqualini D. Influence of manual preflaring and torque on the failure rate of ProTaper rotary instruments. *J Endod.* 2004;30(4):228–30.

- Berutti E, Cantatore G, Castellucci A, Chiandussi G, Pera F, Migliaretti G, et al. Use of nickel-titanium rotary PathFile to create the glide path: comparison with manual preflaring in simulated root canals. *J Endod.* 2009;35(3):408–12.

Chapter 2.6 — Cleaning and Shaping (Full RCT Core)

2.6.1 Objectives of instrumentation · 2.6.2 Hand instrumentation techniques · 2.6.3 Rotary/reciprocation instrumentation · 2.6.4 Shaping challenges

Core texts: [1] Ch. on cleaning and shaping · [2] · [3] · [4] Ch. 5 (Root canal preparation) · [5] · [12]

Additional

- Schilder H. Cleaning and shaping the root canal. *Dent Clin North Am.* 1974;18(2):269–96.
- Weine FS, Kelly RF, Lio PJ. The effect of preparation procedures on original canal shape and on apical foramen shape. *J Endod.* 1975;1(8):255–62.
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- Peters OA. Current challenges and concepts in the preparation of root canal systems: a review. *J Endod.* 2004;30(8):559–67.
- Hülsmann M, Peters OA, Dummer PMH. Mechanical preparation of root canals: shaping goals, techniques and means. *Endod Topics.* 2005;10(1):30–76.
- Pruett JP, Clement DJ, Carnes DL Jr. Cyclic fatigue testing of nickel-titanium endodontic instruments. *J Endod.* 1997;23(2):77–85.
- Plotino G, Grande NM, Cordaro M, Testarelli L, Gambarini G. A review of cyclic fatigue testing of nickel-titanium rotary instruments. *J Endod.* 2009;35(11):1469–76.
- Yared G. Canal preparation using only one Ni-Ti rotary instrument: preliminary observations. *Int Endod J.* 2008;41(4):339–44.
- Gluskin AH, Peters CI, Peters OA. Minimally invasive endodontics: challenging prevailing paradigms. *Br Dent J.* 2014;216(6):347–53.

Chapter 2.7 — Irrigation and Intracanal Disinfection

2.7.1 Role of irrigation · 2.7.2 Irrigants: types and properties · 2.7.3 Irrigation techniques · 2.7.4 Irrigation accidents and prevention · 2.7.5 Intracanal medicaments

Core texts: [1] Ch. on disinfection of the root canal system · [2] · [3] · [10] · [16]

Additional

- Zehnder M. Root canal irrigants. *J Endod.* 2006;32(5):389–98.
- Haapasalo M, Shen Y, Qian W, Gao Y. Irrigation in endodontics. *Dent Clin North Am.* 2010;54(2):291–312.
- Violich DR, Chandler NP. The smear layer in endodontics – a review. *Int Endod J.* 2010;43(1):2–15.
- Basrani BR, Manek S, Sodhi RNS, Fillery E, Manzur A. Interaction between sodium hypochlorite and chlorhexidine gluconate. *J Endod.* 2007;33(8):966–9.
- Gu LS, Kim JR, Ling J, Choi KK, Pashley DH, Tay FR. Review of contemporary irrigant agitation techniques and devices. *J Endod.* 2009;35(6):791–804.
- van der Sluis LWM, Versluis M, Wu MK, Wesselink PR. Passive ultrasonic irrigation of the root canal: a review of the literature. *Int Endod J.* 2007;40(6):415–26.
- Hülsmann M, Hahn W. Complications during root canal irrigation – literature review and case reports. *Int Endod J.* 2000;33(3):186–93.
- Guivarc'h M, Ordioni U, Ahmed HMA, Cohen S, Catherine JH, Bukiet F. Sodium hypochlorite accident: a systematic review. *J Endod.* 2017;43(1):16–24.
- Mohammadi Z, Dummer PMH. Properties and applications of calcium hydroxide in endodontics and dental traumatology. *Int Endod J.* 2011;44(8):697–730.
- Siqueira JF Jr, Rôças IN. Optimising single-visit disinfection with supplementary approaches: a quest for predictability. *Aust Endod J.* 2011;37(3):92–8.

Chapter 2.8 — Obturation (Root Canal Filling)

2.8.1 Objectives of obturation · 2.8.2 Obturation materials · 2.8.3 Obturation techniques · 2.8.4 Quality assessment

Core texts: [1] Ch. on obturation of the cleaned and shaped root canal system · [2] · [3] · [4] · [5] · [20]

Additional

- Schilder H. Filling root canals in three dimensions. *Dent Clin North Am.* 1967;11:723–44.
- Friedman CE, Sandrik JL, Heuer MA, Rapp GW. Composition and physical properties of gutta-percha endodontic filling materials. *J Endod.* 1977;3(8):304–8.
- Whitworth J. Methods of filling root canals: principles and practices. *Endod Topics.* 2005;12(1):2–24.
- Ørstavik D. Materials used for root canal obturation: technical, biological and clinical testing. *Endod Topics.* 2005;12(1):25–38.
- Donnermeyer D, Bürklein S, Dammaschke T, Schäfer E. Endodontic sealers based on calcium silicates: a systematic review. *Odontology.* 2019;107(4):421–36.
- Peng L, Ye L, Tan H, Zhou X. Outcome of root canal obturation by warm gutta-percha versus cold lateral condensation: a meta-analysis. *J Endod.* 2007;33(2):106–9.
- Chybowski EA, Glickman GN, Patel Y, Fleury A, Solomon E, He J. Clinical outcome of non-surgical root canal treatment using a single-cone technique with EndoSequence bioceramic sealer: a retrospective analysis. *J Endod.* 2018;44(6):941–5.
- Ng YL, Mann V, Rahbaran S, Lewsey J, Gulabivala K. Outcome of primary root canal treatment: systematic review of the literature – part 2. Influence of clinical factors. *Int Endod J.* 2008;41(1):6–31.
- Gillen BM, Looney SW, Gu LS, Loushine BA, Weller RN, Loushine RJ, et al. Impact of the quality of coronal restoration versus the quality of root canal fillings on success of root canal treatment: a systematic review and meta-analysis. *J Endod.* 2011;37(7):895–902.

Chapter 2.9 — Inter-Appointment Procedures and Temporary Restorations

Core texts: [1] Chs. on disinfection and restoration of endodontically treated teeth · [2] · [3] · [10] · [13]

Additional

- Chong BS, Pitt Ford TR. The role of intracanal medication in root canal treatment. *Int Endod J.* 1992;25(2):97–106.
- Law A, Messer H. An evidence-based analysis of the antibacterial effectiveness of intracanal medicaments. *J Endod.* 2004;30(10):689–94.
- Sjögren U, Figdor D, Spångberg L, Sundqvist G. The antimicrobial effect of calcium hydroxide as a short-term intracanal dressing. *Int Endod J.* 1991;24(3):119–25.
- Mohammadi Z, Dummer PMH. Properties and applications of calcium hydroxide in endodontics and dental traumatology. *Int Endod J.* 2011;44(8):697–730.
- Trope M, Delano EO, Ørstavik D. Endodontic treatment of teeth with apical periodontitis: single vs. multivisit treatment. *J Endod.* 1999;25(5):345–50.
- Sathorn C, Parashos P, Messer HH. Effectiveness of single- versus multiple-visit endodontic treatment of teeth with apical periodontitis: a systematic review and meta-analysis. *Int Endod J.* 2005;38(6):347–55.
- Webber RT, del Rio CE, Brady JM, Segall RO. Sealing quality of a temporary filling material. *Oral Surg Oral Med Oral Pathol.* 1978;46(1):123–30.
- Cruz EV, Shigetani Y, Ishikawa K, Kota K, Iwaku M, Goodis HE. A laboratory study of coronal microleakage using four temporary restorative materials. *Int Endod J.* 2002;35(4):315–20.
- Naoum HJ, Chandler NP. Temporization for endodontics. *Int Endod J.* 2002;35(12):964–78.

Chapter 2.10 — Post-Operative Pain, Flare-Ups and Pharmacology (UG)

Core texts: [1] Chs. on endodontic pain management and local anaesthesia · [2] · [5] · [17] · [26] · [27]

Additional

- Walton R, Fouad A. Endodontic interappointment flare-ups: a prospective study of incidence and related factors. *J Endod.* 1992;18(4):172–7.
- Siqueira JF Jr. Microbial causes of endodontic flare-ups. *Int Endod J.* 2003;36(7):453–63.
- Sathorn C, Parashos P, Messer H. The prevalence of postoperative pain and flare-up in single- and multiple-visit endodontic treatment: a systematic review. *Int Endod J.* 2008;41(2):91–9.
- Pak JG, White SN. Pain prevalence and severity before, during, and after root canal treatment: a systematic review. *J Endod.* 2011;37(4):429–38.

- Nixdorf DR, Moana-Filho EJ, Law AS, McGuire LA, Hodges JS, John MT. Frequency of persistent tooth pain after root canal therapy: a systematic review and meta-analysis. *J Endod.* 2010;36(2):224–30.
- Keiser K, Hargreaves KM. Building effective strategies for the management of endodontic pain. *Endod Topics.* 2002;3(1):93–105.
- Moore PA, Ziegler KM, Lipman RD, Aminoshariae A, Carrasco-Labra A, Mariotti A. Benefits and harms associated with analgesic medications used in the management of acute dental pain: an overview of systematic reviews. *J Am Dent Assoc.* 2018;149(4):256–65.e3.
- Aminoshariae A, Kulild JC. Evidence-based recommendations for antibiotic usage to treat endodontic infections and pain: a systematic review of randomized controlled trials. *J Am Dent Assoc.* 2016;147(3):186–91.
- Segura-Egea JJ, Gould K, Şen BH, Jonasson P, Cotti E, Mazzoni A, et al. Antibiotics in endodontics: a review. *Int Endod J.* 2017;50(12):1169–84.
- Cope AL, Francis NA, Wood F, Chestnutt IG. Systemic antibiotics for symptomatic apical periodontitis and acute apical abscess in adults. *Cochrane Database Syst Rev.* 2018;(9):CD010136.

Chapter 2.11 — Endodontic Mishaps and Iatrogenic Errors

Core texts: [1] Chs. on cleaning and shaping and management of procedural complications · [2] · [3] · [5] · [15]

Additional

- Jafarzadeh H, Abbott PV. Ledge formation: review of a great challenge in endodontics. *J Endod.* 2007;33(10):1155–62.
- Fuss Z, Trope M. Root perforations: classification and treatment choices based on prognostic factors. *Endod Dent Traumatol.* 1996;12(6):255–64.
- Tsesis I, Fuss Z. Diagnosis and treatment of accidental root perforations. *Endod Topics.* 2006;13(1):95–107.
- Kvinnsland I, Oswald RJ, Halse A, Grønningsæter AG. A clinical and roentgenological study of 55 cases of root perforation. *Int Endod J.* 1989;22(2):75–84.
- Parashos P, Messer HH. Rotary NiTi instrument fracture and its consequences. *J Endod.* 2006;32(11):1031–43.
- Spili P, Parashos P, Messer HH. The impact of instrument fracture on outcome of endodontic treatment. *J Endod.* 2005;31(12):845–50.
- McGuigan MB, Louca C, Duncan HF. Endodontic instrument fracture: causes and prevention. *Br Dent J.* 2013;214(7):341–8.
- Hülsmann M. Methods for removing metal obstructions from the root canal. *Endod Dent Traumatol.* 1993;9(6):223–37.
- Souter NJ, Messer HH. Complications associated with fractured file removal using an ultrasonic technique. *J Endod.* 2005;31(6):450–2.
- Guivarc'h M, Ordioni U, Ahmed HMA, Cohen S, Catherine JH, Bukiet F. Sodium hypochlorite accident: a systematic review. *J Endod.* 2017;43(1):16–24.
- Torabinejad M, Chivian N. Clinical applications of mineral trioxide aggregate. *J Endod.* 1999;25(3):197–205.

Chapter 2.12 — Retreatment Basics (Endodontics II Core)

2.12.1 Indications for retreatment · 2.12.2 Assessment of previously treated teeth · 2.12.3 Retreatment access and removal of restorations · 2.12.4 Managing common retreatment challenges · 2.12.5 Retreatment outcomes and limitations

Core texts: [1] Ch. on nonsurgical retreatment · [2] · [3] · [7] · [23]

Additional

- Siqueira JF Jr. Aetiology of root canal treatment failure: why well-treated teeth can fail. *Int Endod J.* 2001;34(1):1–10.
- Vire DE. Failure of endodontically treated teeth: classification and evaluation. *J Endod.* 1991;17(7):338–42.
- Tamse A. Vertical root fractures in endodontically treated teeth: diagnostic signs and clinical management. *Endod Topics.* 2006;13(1):84–94.
- Friedman S, Stabholz A, Tamse A. Endodontic retreatment – case selection and technique. Part 3. Retreatment techniques. *J Endod.* 1990;16(11):543–9.
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Chapter 2.13 — Endodontic Surgery (Awareness / Introduction)

2.13.1 Indications: persistent lesion after adequate retreatment, biopsy (awareness) · 2.13.2 Basic concepts: apicectomy, retrograde filling, MTA/bioceramic materials

Core texts: [1] Ch. on periradicular surgery · [2] · [3] · [5] · [6] · [21]

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Chapter 2.14 — Restoration After RCT (Interface with Operative/Prosthodontics)

2.14.1 Coronal seal principles: immediate build-up, cuspal coverage, temporary vs definitive restorations · 2.14.2 Post-core overview: indications, ferrule, fibre vs metal posts

Core texts: [1] Ch. on restoration of the endodontically treated tooth · [2] · [3] · [4] · [13] · [14]

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Chapter 2.15 — Clinical Competencies and OSCE/Viva Headings (Year 4)

2.15.1 Core clinical competencies · 2.15.2 Typical viva/OSCE domains

Core texts: [1] · [2] · [4] · [18] · [20] · [22] · [30]–[33]

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