Oral Biology (Advanced Concepts)

Year 2 — Bachelor of Dental Surgery

Reference and Resource List — Chapters 1 to 13

Supporting the MCQ, SBA, SAQ and flashcard question bank

BM Education FZE

Disclaimer

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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 core sources by their bracketed number together with the additional references specific to that chapter.

PART 1 — CORE REFERENCES (ALL CHAPTERS)

1.1 Principal oral biology, histology and embryology texts

1. Nanci A. Ten Cate's Oral Histology: Development, Structure, and Function. 10th ed. St Louis: Elsevier; 2024.
2. Berkovitz BKB, Holland GR, Moxham BJ. Oral Anatomy, Histology and Embryology. 5th ed. Edinburgh: Elsevier; 2017.
3. Chiego DJ Jr. Essentials of Oral Histology and Embryology: A Clinical Approach. 5th ed. St Louis: Elsevier; 2019.
4. Kumar GS, editor. Orban's Oral Histology and Embryology. 15th ed. New Delhi: Elsevier India; 2019.
5. Hand AR, Frank ME. Fundamentals of Oral Histology and Physiology. Ames (IA): Wiley Blackwell; 2015.
6. Bath-Balogh M, Fehrenbach MJ. Illustrated Dental Embryology, Histology, and Anatomy. 4th ed. St Louis: Elsevier; 2016.

1.2 General histology, cell biology, physiology and biochemistry

7. Ross MH, Pawlina W. Histology: A Text and Atlas with Correlated Cell and Molecular Biology. 8th ed. Philadelphia: Wolters Kluwer; 2020.
8. Mescher AL. Junqueira's Basic Histology: Text and Atlas. 16th ed. New York: McGraw Hill; 2021.
9. Alberts B, Heald R, Johnson A, Morgan D, Raff M, Roberts K, et al. Molecular Biology of the Cell. 7th ed. New York: W.W. Norton; 2022.
10. Hall JE, Hall ME. Guyton and Hall Textbook of Medical Physiology. 14th ed. Philadelphia: Elsevier; 2021.

11. Barrett KE, Barman SM, Brooks HL, Yuan JX. Ganong's Review of Medical Physiology. 26th ed. New York: McGraw Hill; 2019.
12. Rodwell VW, Bender DA, Botham KM, Kennelly PJ, Weil PA, editors. Harper's Illustrated Biochemistry. 32nd ed. New York: McGraw Hill; 2023.

1.3 Oral microbiology, immunology and biofilm science

13. Marsh PD, Lewis MAO, Rogers H, Williams DW, Wilson M. Marsh and Martin's Oral Microbiology. 6th ed. Edinburgh: Elsevier; 2016.
14. Lamont RJ, Hajishengallis GN, Koo H, Jenkinson HF, editors. Oral Microbiology and Immunology. 3rd ed. Washington (DC): ASM Press; 2019.
15. Murphy K, Weaver C. Janeway's Immunobiology. 10th ed. New York: W.W. Norton; 2022.
16. Abbas AK, Lichtman AH, Pillai S. Cellular and Molecular Immunology. 10th ed. Philadelphia: Elsevier; 2022.

1.4 Cariology, saliva and preventive science

17. Fejerskov O, Nyvad B, Kidd EAM, editors. Dental Caries: The Disease and Its Clinical Management. 3rd ed. Oxford: Wiley Blackwell; 2015.
18. Kidd EAM, Fejerskov O. Essentials of Dental Caries. 4th ed. Oxford: Oxford University Press; 2016.
19. Edgar M, Dawes C, O'Mullane D, editors. Saliva and Oral Health. 4th ed. London: Stephen Hancocks; 2012.
20. Lussi A, Ganss C, editors. Erosive Tooth Wear: From Diagnosis to Therapy. Monographs in Oral Science, vol. 25. 2nd ed. Basel: Karger; 2014.

1.5 Periodontal, bone, pulp and mucosal biology

21. Newman MG, Takei HH, Klokkevold PR, Carranza FA, editors. Newman and Carranza's Clinical Periodontology. 14th ed. Philadelphia: Elsevier; 2023.
22. Lang NP, Berglundh T, Giannobile WV, Sanz M, editors. Lindhe's Clinical Periodontology and Implant Dentistry. 7th ed. Hoboken (NJ): Wiley Blackwell; 2021.
23. Hargreaves KM, Berman LH, editors. Cohen's Pathways of the Pulp. 12th ed. St Louis: Elsevier; 2021.
24. Torabinejad M, Fouad AF, Shabahang S. Endodontics: Principles and Practice. 6th ed. St Louis: Elsevier; 2021.
25. Squier CA, Brogden KA. Human Oral Mucosa: Development, Structure and Function. Chichester: Wiley Blackwell; 2011.

1.6 Clinical correlation and applied texts

26. Odell EW. Cawson's Essentials of Oral Pathology and Oral Medicine. 10th ed. Edinburgh: Elsevier; 2024.
27. Proffit WR, Fields HW, Larson BE, Sarver DM. Contemporary Orthodontics. 6th ed. Philadelphia: Elsevier; 2019.
28. Andreasen JO, Andreasen FM, Andersson L, editors. Textbook and Color Atlas of Traumatic Injuries to the Teeth. 5th ed. Oxford: Wiley Blackwell; 2019.
29. Banerjee A, Watson TF. Pickard's Guide to Minimally Invasive Operative Dentistry. 10th ed. Oxford: Oxford University Press; 2015.

1.7 Guidelines, standards and public health sources

30. Office for Health Improvement and Disparities. Delivering better oral health: an evidence-based toolkit for prevention. London: OHID. Available from: https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention
31. Scottish Dental Clinical Effectiveness Programme. Clinical guidance in dentistry. Dundee: SDCEP. Available from: https://www.sdcep.org.uk
32. National Institute for Health and Care Excellence. Dental checks: intervals between oral health reviews. Clinical guideline CG19. London: NICE; 2004. Available from: https://www.nice.org.uk/guidance/cg19
33. World Health Organization. Global oral health status report: towards universal health coverage for oral health by 2030. Geneva: WHO; 2022. Available from: https://www.who.int
34. General Dental Council. Preparing for practice: dental team learning outcomes for registration. London: GDC; 2015. Available from: https://www.gdc-uk.org
35. Dental Council of India. Bachelor of Dental Surgery (BDS) Course Regulations, 2007 (as amended). New Delhi: DCI.

1.8 Key journals for currency

Journal of Dental Research · Archives of Oral Biology · Caries Research · European Journal of Oral Sciences · Journal of Periodontal Research · Journal of Clinical Periodontology · Periodontology 2000 · International Endodontic Journal · Journal of Endodontics · Oral Diseases · Journal of Oral Pathology & Medicine · Bone

PART 2 — CHAPTER-SPECIFIC REFERENCES

Chapter 1 — Foundations of Oral Biology (Advanced Orientation)

1.1 Scope and integration · 1.2 Cellular and molecular basics (as applied to oral tissues)

Core texts: [1] introductory and general chapters on the organisation of the oral tissues · [2] general oral anatomy and histology chapters · [9] cell signalling and extracellular matrix chapters · [10] general and endocrine physiology chapters · [12] connective tissue, collagen and mineral metabolism chapters · [21] structure of the periodontium chapter

Additional

- Frantz C, Stewart KM, Weaver VM. The extracellular matrix at a glance. J Cell Sci. 2010;123(Pt 24):4195–9.
- Sorsa T, Tjäderhane L, Salo T. Matrix metalloproteinases (MMPs) in oral diseases. Oral Dis. 2004;10(6):311–8.
- Hannas AR, Pereira JC, Granjeiro JM, Tjäderhane L. The role of matrix metalloproteinases in the oral environment. Acta Odontol Scand. 2007;65(1):1–13.
- Bartold PM, Van Dyke TE. Periodontitis: a host-mediated disruption of microbial homeostasis. Periodontol 2000. 2013;62(1):203–17.
- Marsh PD. Are dental diseases examples of ecological catastrophes? Microbiology. 2003;149(Pt 2):279–94.
- Sharpe PT. Dental mesenchymal stem cells. Development. 2016;143(13):2273–80.
- Sculean A, Gruber R, Bosshardt DD. Soft tissue wound healing around teeth and dental implants. J Clin Periodontol. 2014;41(Suppl 15):S6–22.

Chapter 2 — Enamel Biology (Beyond Basic Histology)

2.1 Enamel ultrastructure · 2.2 Enamel formation and maturation (advanced) · 2.3 Enamel permeability and diffusion · 2.4 Enamel pathobiology (intro)

Core texts: [1] amelogenesis and enamel chapters · [2] enamel chapter · [4] enamel chapter · [6] enamel chapter · [17] and [18] enamel caries chapters · [20] erosion chapters · [26] hard tissue pathology chapters

Additional

- Lacruz RS, Habelitz S, Wright JT, Paine ML. Dental enamel formation and implications for oral health and disease. Physiol Rev. 2017;97(3):939–93.
- Simmer JP, Hu JC. Dental enamel formation and its impact on clinical dentistry. J Dent Educ. 2001;65(9):896–905.
- Smith CE. Cellular and chemical events during enamel maturation. Crit Rev Oral Biol Med. 1998;9(2):128–61.
- Bartlett JD. Dental enamel development: proteinases and their enamel matrix substrates. ISRN Dent. 2013;2013:684607.
- He LH, Swain MV. Understanding the mechanical behaviour of human enamel from its structural and compositional characteristics. J Mech Behav Biomed Mater. 2008;1(1):18–29.
- Shellis RP, Featherstone JDB, Lussi A. Understanding the chemistry of dental erosion. Monogr Oral Sci. 2014;25:163–79.
- Crawford PJM, Aldred M, Bloch-Zupan A. Amelogenesis imperfecta. Orphanet J Rare Dis. 2007;2:17.
- Weerheijm KL, Duggal M, Mejàre I, Papagiannoulis L, Koch G, Martens LC, et al. Judgement criteria for molar incisor hypomineralisation (MIH) in epidemiologic studies. Eur J Paediatr Dent. 2003;4(3):110–3.

Chapter 3 — Dentin Biology and Dentino-Pulp Complex

3.1 Dentin ultrastructure · 3.2 Dentinogenesis and types of dentin · 3.3 Dentinal sensitivity and hydrodynamics · 3.4 Dentin permeability and smear layer biology

Core texts: [1] dentin–pulp complex chapters · [2] dentine chapter · [23] pulp–dentine complex chapters · [24] biology of the pulp and periradicular tissues chapters · [29] operative biology chapters

Additional

- Goldberg M, Kulkarni AB, Young M, Boskey A. Dentin: structure, composition and mineralization. Front Biosci (Elite Ed). 2011;3:711–35.
- Pashley DH. Dynamics of the pulpo-dentin complex. Crit Rev Oral Biol Med. 1996;7(2):104–33.
- Brännström M. The hydrodynamic theory of dentinal pain: sensation in preparations, caries, and the dentinal crack syndrome. J Endod. 1986;12(10):453–7.
- West NX, Lussi A, Seong J, Hellwig E. Dentin hypersensitivity: pain mechanisms and aetiology of exposed cervical dentin. Clin Oral Investig. 2013;17(Suppl 1):S9–19.
- Pashley DH, Tay FR, Breschi L, Tjäderhane L, Carvalho RM, Carrilho M, et al. State of the art etch-and-rinse adhesives. Dent Mater. 2011;27(1):1–16.
- Tjäderhane L, Nascimento FD, Breschi L, Mazzoni A, Tersariol IL, Geraldeli S, et al. Strategies to prevent hydrolytic degradation of the hybrid layer. Dent Mater. 2013;29(10):999–1011.
- Smith AJ, Cassidy N, Perry H, Bègue-Kirn C, Ruch JV, Lesot H. Reactionary dentinogenesis. Int J Dev Biol. 1995;39(1):273–80.

Chapter 4 — Pulp Biology (Advanced)

4.1 Pulp histophysiology (beyond basics) · 4.2 Innervation of pulp · 4.3 Pulp defense and repair mechanisms · 4.4 Pulp aging and calcifications

Core texts: [1] dental pulp chapter · [2] pulp chapter · [23] structure and functions of the pulp–dentine complex chapters · [24] pulp and periradicular biology chapters

Additional

- Cooper PR, Takahashi Y, Graham LW, Simon S, Imazato S, Smith AJ. Inflammation–regeneration interplay in the dentine–pulp complex. J Dent. 2010;38(9):687–97.
- Smith AJ, Duncan HF, Diogenes A, Simon S, Cooper PR. Exploiting the bioactive properties of the dentin–pulp complex in regenerative endodontics. J Endod. 2016;42(1):47–56.
- Byers MR, Närhi MV. Dental injury models: experimental tools for understanding neuroinflammatory interactions and polymodal nociceptor functions. Crit Rev Oral Biol Med. 1999;10(1):4–39.
- Goldberg M, Njeh A, Uzunoglu E. Is pulp inflammation a prerequisite for pulp healing and regeneration? Mediators Inflamm. 2015;2015:347649.
- Duncan HF, Galler KM, Tomson PL, Simon S, El-Karim I, Kundzina R, et al. European Society of Endodontology position statement: management of deep caries and the exposed pulp. Int Endod J. 2019;52(7):923–34.
- Bjørndal L, Simon S, Tomson PL, Duncan HF. Management of deep caries and the exposed pulp. Int Endod J. 2019;52(7):949–73.
- Gronthos S, Mankani M, Brahim J, Robey PG, Shi S. Postnatal human dental pulp stem cells (DPSCs) in vitro and in vivo. Proc Natl Acad Sci U S A. 2000;97(25):13625–30.

Chapter 5 — Cementum Biology

5.1 Cementogenesis and types · 5.2 Cementoblasts and cementocytes · 5.3 Cementum in health and disease (intro)

Core texts: [1] cementum chapter · [2] cementum chapter · [4] cementum chapter · [21] structure of the periodontium chapter · [22] anatomy of the periodontium chapter · [28] root resorption chapters

Additional

- Bosshardt DD, Selvig KA. Dental cementum: the dynamic tissue covering of the root. Periodontol 2000. 1997;13:41–75.
- Bosshardt DD. Are cementoblasts a subpopulation of osteoblasts or a unique phenotype? J Dent Res. 2005;84(5):390–406.
- Yamamoto T, Hasegawa T, Yamamoto T, Hongo H, Amizuka N. Histology of human cementum: its structure, function, and development. Jpn Dent Sci Rev. 2016;52(3):63–74.
- Nanci A, Bosshardt DD. Structure of periodontal tissues in health and disease. Periodontol 2000. 2006;40:11–28.
- Foster BL. Methods for studying tooth root cementum by light microscopy. Int J Oral Sci. 2012;4(3):119–28.
- Tronstad L. Root resorption — etiology, terminology and clinical manifestations. Endod Dent Traumatol. 1988;4(6):241–52.
- Saygin NE, Giannobile WV, Somerman MJ. Molecular and cell biology of cementum. Periodontol 2000. 2000;24:73–98.

Chapter 6 — Periodontal Ligament (PDL) Biology

6.1 PDL structure and components · 6.2 PDL functions · 6.3 PDL remodeling and orthodontic tooth movement (intro) · 6.4 Clinical correlations

Core texts: [1] periodontal ligament chapter · [2] periodontal ligament chapter · [21] and [22] structure and anatomy of the periodontium chapters · [27] biological basis of orthodontic tooth movement chapter · [28] avulsion and replantation chapters

Additional

- Beertsen W, McCulloch CA, Sodek J. The periodontal ligament: a unique, multifunctional connective tissue. Periodontol 2000. 1997;13:20–40.
- McCulloch CA, Lekic P, McKee MD. Role of physical forces in regulating the form and function of the periodontal ligament. Periodontol 2000. 2000;24:56–72.
- Krishnan V, Davidovitch Z. Cellular, molecular, and tissue-level reactions to orthodontic force. Am J Orthod Dentofacial Orthop. 2006;129(4):469.e1–32.
- Meikle MC. The tissue, cellular, and molecular regulation of orthodontic tooth movement: 100 years after Carl Sandstedt. Eur J Orthod. 2006;28(3):221–40.
- Seo BM, Miura M, Gronthos S, Bartold PM, Batouli S, Brahim J, et al. Investigation of multipotent postnatal stem cells from human periodontal ligament. Lancet. 2004;364(9429):149–55.
- Trope M. Root resorption due to dental trauma. Endod Topics. 2002;1(1):79–100.
- Bourauel C, Vollmer D, Jager A. Application of bone remodeling theories in the simulation of orthodontic tooth movements. J Orofac Orthop. 2000;61(4):266–79.

Chapter 7 — Alveolar Bone Biology

7.1 Bone structure (applied) · 7.2 Bone cells and remodeling · 7.3 Bone healing and repair · 7.4 Alveolar bone loss (intro)

Core texts: [1] bone chapter and repair and regeneration chapter · [10] calcium and bone homeostasis chapters · [21] bone loss and patterns of bone destruction chapters · [22] anatomy and healing chapters

Additional

- Boyle WJ, Simonet WS, Lacey DL. Osteoclast differentiation and activation. Nature. 2003;423(6937):337–42.
- Bonewald LF. The amazing osteocyte. J Bone Miner Res. 2011;26(2):229–38.
- Sims NA, Martin TJ. Coupling the activities of bone formation and resorption: a multitude of signals within the basic multicellular unit. Bonekey Rep. 2014;3:481.
- Hienz SA, Paliwal S, Ivanovski S. Mechanisms of bone resorption in periodontitis. J Immunol Res. 2015;2015:615486.
- Cardaropoli G, Araújo M, Lindhe J. Dynamics of bone tissue formation in tooth extraction sites. J Clin Periodontol. 2003;30(9):809–18.
- Araújo MG, Lindhe J. Dimensional ridge alterations following tooth extraction. An experimental study in the dog. J Clin Periodontol. 2005;32(2):212–8.
- Ruggiero SL, Dodson TB, Aghaloo T, Carlson ER, Ward BB, Kademani D. American Association of Oral and Maxillofacial Surgeons' position paper on medication-related osteonecrosis of the jaws — 2022 update. J Oral Maxillofac Surg. 2022;80(5):920–43.
- Scottish Dental Clinical Effectiveness Programme. Oral health management of patients at risk of medication-related osteonecrosis of the jaw. Dundee: SDCEP; 2017. Available from: https://www.sdcep.org.uk

Chapter 8 — Oral Mucosal Biology and Barrier Function

8.1 Oral mucosa types · 8.2 Epithelial turnover and keratinization · 8.3 Oral mucosal immune defense (intro integration) · 8.4 Wound healing in oral mucosa

Core texts: [1] oral mucosa chapter and repair and regeneration chapter · [2] oral mucosa chapter · [25] whole text · [15] barrier and mucosal immunity chapters · [26] mucosal disease chapters

Additional

- Squier CA, Kremer MJ. Biology of oral mucosa and esophagus. J Natl Cancer Inst Monogr. 2001;(29):7–15.
- Presland RB, Dale BA. Epithelial structural proteins of the skin and oral cavity: function in health and disease. Crit Rev Oral Biol Med. 2000;11(4):383–408.
- Dale BA, Fredericks LP. Antimicrobial peptides in the oral environment: expression and function in health and disease. Curr Issues Mol Biol. 2005;7(2):119–33.
- Moutsopoulos NM, Konkel JE. Tissue-specific immunity at the oral mucosal barrier. Trends Immunol. 2018;39(4):276–87.
- Glim JE, van Egmond M, Niessen FB, Everts V, Beelen RH. Detrimental dermal wound healing: what can we learn from the oral mucosa? Wound Repair Regen. 2013;21(5):648–60.
- Politis C, Schoenaers J, Jacobs R, Agbaje JO. Wound healing problems in the mouth. Front Physiol. 2016;7:507.
- Sculean A, Gruber R, Bosshardt DD. Soft tissue wound healing around teeth and dental implants. J Clin Periodontol. 2014;41(Suppl 15):S6–22.

Chapter 9 — Salivary Biology and the Acquired Pellicle

9.1 Acquired pellicle formation · 9.2 Salivary proteins and oral homeostasis · 9.3 Saliva and caries susceptibility

Core texts: [1] salivary glands chapter · [5] salivary physiology chapters · [19] whole text · [13] saliva and oral ecology chapters · [17] and [18] saliva and caries chapters

Additional

- Dawes C, Pedersen AM, Villa A, Ekström J, Proctor GB, Vissink A, et al. The functions of human saliva: a review sponsored by the World Workshop on Oral Medicine VI. Arch Oral Biol. 2015;60(6):863–74.
- Hannig M, Joiner A. The structure, function and properties of the acquired pellicle. Monogr Oral Sci. 2006;19:29–64.
- Siqueira WL, Custodio W, McDonald EE. New insights into the composition and functions of the acquired enamel pellicle. J Dent Res. 2012;91(12):1110–8.
- Amerongen AV, Veerman EC. Saliva — the defender of the oral cavity. Oral Dis. 2002;8(1):12–22.
- Lynge Pedersen AM, Belstrøm D. The role of natural salivary defences in maintaining a healthy oral microbiota. J Dent. 2019;80(Suppl 1):S3–12.
- Bardow A, Nyvad B, Nauntofte B. Relationships between medication intake, complaints of dry mouth, salivary flow rate and composition, and the rate of tooth demineralization in situ. Arch Oral Biol. 2001;46(5):413–23.
- Villa A, Connell CL, Abati S. Diagnosis and management of xerostomia and hyposalivation. Ther Clin Risk Manag. 2015;11:45–51.

Chapter 10 — Biofilm Biology: Dental Plaque as a Microbial Ecosystem

10.1 Biofilm formation stages · 10.2 Ecological plaque hypothesis (intro–advanced concept) · 10.3 Caries biofilm biology · 10.4 Periodontal biofilm biology (intro)

Core texts: [13] dental plaque and biofilm chapters · [14] oral biofilm and community chapters · [17] and [18] microbial aspects of caries chapters · [21] periodontal microbiology chapters

Additional

- Marsh PD. Dental plaque as a biofilm and a microbial community — implications for health and disease. BMC Oral Health. 2006;6(Suppl 1):S14.

- Kolenbrander PE, Palmer RJ Jr, Periasamy S, Jakubovics NS. Oral multispecies biofilm development and the key role of cell–cell distance. Nat Rev Microbiol. 2010;8(7):471–80.
- Takahashi N, Nyvad B. The role of bacteria in the caries process: ecological perspectives. J Dent Res. 2011;90(3):294–303.
- Bowen WH, Koo H. Biology of Streptococcus mutans-derived glucosyltransferases: role in extracellular matrix formation of cariogenic biofilms. Caries Res. 2011;45(1):69–86.
- Socransky SS, Haffajee AD, Cugini MA, Smith C, Kent RL Jr. Microbial complexes in subgingival plaque. J Clin Periodontol. 1998;25(2):134–44.
- Hajishengallis G, Darveau RP, Curtis MA. The keystone-pathogen hypothesis. Nat Rev Microbiol. 2012;10(10):717–25.
- Nyvad B, Takahashi N. Integrated hypothesis of dental caries and periodontal diseases. J Oral Microbiol. 2020;12(1):1710953.

Chapter 11 — Oral Host Response and Inflammation (Applied Oral Biology)

11.1 Innate immune response in oral tissues · 11.2 Cytokines and mediators in oral inflammation · 11.3 Gingival crevicular fluid (GCF) · 11.4 Resolution of inflammation (intro)

Core texts: [15] innate immunity and inflammation chapters · [16] cytokines and effector mechanisms chapters · [21] host response and pathogenesis chapters · [22] pathogenesis of periodontitis chapters · [14] host–microbe interaction chapters

Additional

- Hajishengallis G. Periodontitis: from microbial immune subversion to systemic inflammation. Nat Rev Immunol. 2015;15(1):30–44.
- Page RC, Kornman KS. The pathogenesis of human periodontitis: an introduction. Periodontol 2000. 1997;14:9–11.
- Graves DT, Cochran D. The contribution of interleukin-1 and tumor necrosis factor to periodontal tissue destruction. J Periodontol. 2003;74(3):391–401.
- Barros SP, Williams R, Offenbacher S, Morelli T. Gingival crevicular fluid as a source of biomarkers for periodontitis. Periodontol 2000. 2016;70(1):53–64.
- Serhan CN. Pro-resolving lipid mediators are leads for resolution physiology. Nature. 2014;510(7503):92–101.
- Van Dyke TE. Pro-resolving mediators in the regulation of periodontal disease. Mol Aspects Med. 2017;58:21–36.
- Chapple ILC, Mealey BL, Van Dyke TE, Bartold PM, Dommisch H, Eickholz P, et al. Periodontal health and gingival diseases and conditions on an intact and a reduced periodontium: consensus report of workgroup 1 of the 2017 World Workshop. J Clin Periodontol. 2018;45(Suppl 20):S68–77.
- Papapanou PN, Sanz M, Buduneli N, Dietrich T, Feres M, Fine DH, et al. Periodontitis: consensus report of workgroup 2 of the 2017 World Workshop. J Clin Periodontol. 2018;45(Suppl 20):S162–70.

Chapter 12 — Mineralization, Demineralization and Remineralization

12.1 Mineralization biology · 12.2 Demineralization process · 12.3 Remineralization process · 12.4 Preventive technologies (intro)

Core texts: [1] mineralization and enamel chapters · [17] and [18] caries chemistry and management chapters · [20] erosion chapters · [30] toolkit for prevention · [31] preventive guidance

Additional

- Featherstone JDB. Dental caries: a dynamic disease process. Aust Dent J. 2008;53(3):286–91.

- Featherstone JDB. The continuum of dental caries — evidence for a dynamic disease process. J Dent Res. 2004;83 Spec No C:C39–42.
- Dawes C. What is the critical pH and why does a tooth dissolve in acid? J Can Dent Assoc. 2003;69(11):722–4.
- ten Cate JM. Contemporary perspective on the use of fluoride products in caries prevention. Br Dent J. 2013;214(4):161–7.
- Buzalaf MAR, Pessan JP, Honório HM, ten Cate JM. Mechanisms of action of fluoride for caries control. Monogr Oral Sci. 2011;22:97–114.
- Cochrane NJ, Cai F, Huq NL, Burrow MF, Reynolds EC. New approaches to enhanced remineralization of tooth enamel. J Dent Res. 2010;89(11):1187–97.
- Walsh T, Worthington HV, Glenny AM, Marinho VCC, Jeroncic A. Fluoride toothpastes of different concentrations for preventing dental caries. Cochrane Database Syst Rev. 2019;(3):CD007868.
- Marinho VCC, Worthington HV, Walsh T, Clarkson JE. Fluoride varnishes for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2013;(7):CD002279.

Chapter 13 — Aging, Repair and Regeneration in Oral Tissues

13.1 Aging changes (oral tissues) · 13.2 Repair mechanisms across tissues · 13.3 Regenerative dentistry (awareness)

Core texts: [1] repair and regeneration chapter and age changes sections · [21] regenerative periodontal therapy chapters · [22] regeneration and healing chapters · [23] regenerative endodontics chapters · [25] mucosal ageing sections

Additional

- Murray PE, Stanley HR, Matthews JB, Sloan AJ, Smith AJ. Age-related odontometric changes of human teeth. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2002;93(4):474–82.
- Lamster IB, Asadourian L, Del Carmen T, Friedman PK. The aging mouth: differentiating normal aging from disease. Periodontol 2000. 2016;72(1):96–107.
- Huang GT, Gronthos S, Shi S. Mesenchymal stem cells derived from dental tissues vs. those from other sources: their biology and role in regenerative medicine. J Dent Res. 2009;88(9):792–806.
- Galler KM, Krastl G, Simon S, Van Gorp G, Meschi N, Vahedi B, et al. European Society of Endodontology position statement: revitalization procedures. Int Endod J. 2016;49(8):717–23.
- Nyman S, Lindhe J, Karring T, Rylander H. New attachment following surgical treatment of human periodontal disease. J Clin Periodontol. 1982;9(4):290–6.
- Sculean A, Nikolidakis D, Nikou G, Ivanovic A, Chapple ILC, Stavropoulos A. Biomaterials for promoting periodontal regeneration in human intrabony defects: a systematic review. Periodontol 2000. 2015;68(1):182–216.
- Kassebaum NJ, Bernabé E, Dahiya M, Bhandari B, Murray CJL, Marcenes W. Global burden of severe tooth loss: a systematic review and meta-analysis. J Dent Res. 2014;93(7 Suppl):20S–28S.

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