COMPREHENSIVE MOCK EXAM 6

Supplemental to: National Board Dental Hygiene Examination Review

Rasmus Broberg

National Board Dental Hygiene Examination (NBDHE) — 350 questions; 200 discipline-based and 150 case-based; A-D single-best-answer format used by this parent book; domain-weighted to the current JCNDE blueprint

Board-Review Questions

1. A patient has profuse bleeding from a laceration near the inferior border of the mandible just anterior to the masseter. Which vessel is most likely involved?

A. Lingual artery

B. Maxillary artery

C. Facial artery

D. Superficial temporal artery

2. Which structure is most closely related to the roots of maxillary posterior teeth and can complicate periapical interpretation?

A. Nasal septum

B. Mandibular canal

C. Maxillary sinus

D. Mental foramen

3. An anesthetic block intended to numb the posterior hard palate should target which nerve?

A. Nasopalatine nerve

B. Greater palatine nerve

C. Long buccal nerve

D. Auriculotemporal nerve

4. During removal of a mandibular third molar, injury to a nerve on the lingual aspect of the mandible could reduce general sensation from the anterior two thirds of the tongue. Which nerve is involved?

A. Chorda tympani nerve

B. Lingual nerve

C. Glossopharyngeal nerve

D. Inferior alveolar nerve

5. The articular disc of the temporomandibular joint primarily divides the joint into which two functional spaces?

A. Medial sensory and lateral motor compartments

B. Anterior vascular and posterior lymphatic compartments

C. Superior translational and inferior rotational compartments

D. Superficial fibrous and deep cartilaginous compartments

6. Which bone does not articulate directly with any other bone?

A. Temporal bone

B. Sphenoid bone

C. Mandible

D. Hyoid bone

7. The incisive canal transmits the nasopalatine nerve and opens onto the hard palate at which landmark?

A. Greater palatine foramen

B. Incisive papilla

C. Hamular notch

D. Retromolar pad

8. The anteroposterior curvature formed by the mandibular cusp tips is known as which occlusal curve?

A. Curve of Wilson

B. Monson sphere

C. Curve of Spee

D. Frankfort plane

9. The cusp of Carabelli is most commonly found on which surface of a permanent tooth?

A. Buccal surface of the mesiobuccal cusp of a mandibular first molar

B. Lingual surface of a maxillary canine cingulum

C. Lingual surface of the mesiolingual cusp of a maxillary first molar

D. Distal surface of a mandibular second premolar

10. A permanent mandibular first molar usually has which root pattern?

A. One buccal root and one lingual root

B. One mesial root and one distal root

C. Two buccal roots and one palatal root

D. A single conical root

11. Which cells are responsible for formation of enamel matrix before tooth eruption?

A. Odontoblasts

B. Cementoblasts

C. Ameloblasts

D. Osteoblasts

12. Cells that deposit cementum on the tooth root are called what?

A. Fibroblasts

B. Cementoblasts

C. Osteoclasts

D. Ameloblasts

13. Which collagen type predominates in the periodontal ligament?

A. Type II collagen

B. Type IV collagen

C. Type I collagen

D. Type VII collagen

14. The epithelial rests of Malassez are remnants of which embryologic structure?

A. Dental lamina

B. Enamel knot

C. Hertwig root sheath

D. Reduced enamel epithelium

15. Which relationship between enamel and cementum at the CEJ occurs most commonly?

A. Enamel overlaps cementum

B. Cementum overlaps enamel

C. A wide dentin gap is generally present

D. Enamel and cementum rarely meet

16. Why can the junctional epithelium respond rapidly to injury and inflammation?

A. It is substantially keratinized

B. It has a high cellular turnover rate

C. It contains no intercellular spaces

D. It is avascular and metabolically inactive

17. Which pulpal cells are primarily responsible for producing reparative dentin after injury?

A. Odontoblast cells

B. Ameloblasts

C. Melanocytes

D. Chondrocytes

18. Secondary dentin is best described as dentin that forms when?

A. before crown mineralization begins

B. after bacterial pulp necrosis

C. Slowly after root completion during normal function

D. Exclusively during primary tooth resorption

19. Which epithelial structure guides root shape and induces formation of root dentin?

A. Enamel organ stratum intermedium

B. Dental follicle reduced epithelium

C. Oral ectoderm vestibular lamina

D. Hertwig epithelial root sheath

20. The radiographic lamina dura corresponds most closely to which anatomic structure?

A. Cortical plate at the mandibular border

B. Cancellous bone between tooth roots

C. Alveolar bone proper lining the tooth socket

D. Cementum covering the root surface

21. At rest, which major salivary glands contribute the largest proportion of whole saliva?

A. Submandibular glands

B. Parotid glands

C. Sublingual glands

D. Minor labial glands

22. Salivary alpha-amylase begins digestion of which nutrient?

A. Protein

B. Triglyceride

C. Cellulose

D. Starch

23. Which salivary buffering system becomes especially important as salivary flow increases?

A. Hemoglobin buffer

B. Bicarbonate buffer

C. Urea cycle

D. Creatine phosphate system

24. Parathyroid hormone generally raises serum calcium by promoting which overall effect?

A. Calcium deposition into bone

B. Renal calcium loss and phosphate retention

C. Bone resorption and renal calcium conservation

D. Complete inhibition of vitamin D activation

25. A patient with vitamin B12 deficiency is most likely to develop which systemic finding?

A. Microcytic iron-deficiency anemia

B. Polycythemia from excess erythropoietin

C. Vitamin B12-related megaloblastic anemia

D. Hemolysis caused by vitamin K excess

26. Adequate vitamin D is important for oral health primarily because it supports which process?

A. Intestinal absorption of calcium and phosphate

B. Collagen cross-linking independent of minerals

C. Direct synthesis of salivary antibodies

D. Platelet aggregation during clot formation

27. Which cellular structure is the site of protein translation?

A. Lysosome

B. Ribosome

C. Centriole

D. Golgi cisterna

28. The primary function of hemoglobin is to do what?

A. Digest dietary iron in plasma

B. Produce antibodies in lymphocytes

C. Transport oxygen in circulating erythrocytes

D. Activate platelets at wound sites

29. Streptococcus mutans contributes to caries initiation partly by producing extracellular glucans that do what?

A. Neutralize plaque acids at low pH

B. Promote bacterial adherence within dental plaque

C. Destroy salivary immunoglobulins systemically

D. Mineralize enamel by releasing calcium

30. Lactobacillus species are most strongly associated with which stage of caries?

A. Initial attachment to clean enamel before plaque forms

B. Remineralization of early white-spot lesions

C. Formation of calculus by urease activity

D. Progression of established lesions in acidic environments

31. Aggregatibacter actinomycetemcomitans has been classically associated with which periodontal pattern?

A. mild plaque-induced gingivitis in older adults

B. Rapid periodontal destruction in younger susceptible patients

C. Pericoronitis limited to erupting third molars

D. Necrotizing sialadenitis of minor salivary glands

32. A marked increase in motile spirochetes in a subgingival sample is most consistent with what?

A. A sterile sulcus after professional debridement

B. A dysbiotic periodontal biofilm associated with disease

C. Normal mineralization of supragingival calculus

D. Predominantly viral infection without bacteria

33. Lipopolysaccharide from gram-negative bacteria is also known as what?

A. Exotoxin A

B. Capsular antibody

C. Bacterial glycocalyx enzyme

D. Lipopolysaccharide endotoxin

34. Activation of the complement cascade can directly enhance host defense by promoting which effect?

A. Opsonization and inflammatory cell recruitment

B. Permanent suppression of neutrophil migration

C. Reduced antibody-mediated opsonization

D. Conversion of bacteria into host epithelial cells

35. Which immunoglobulin is most abundant in serum and is important in secondary immune responses?

A. IgE

B. IgD

C. Secretory IgA

D. Serum IgG

36. Which monitoring method provides the strongest routine evidence that a sterilization cycle achieved conditions capable of killing resistant microorganisms?

A. Biological spore-indicator testing

B. Color change on external process tape

C. Visual inspection of a dry instrument pouch

D. Recording the room temperature before the cycle

37. A patient has diffuse painful gingival desquamation and intact tense bullae. Which autoimmune disorder is most compatible with this presentation?

A. Geographic tongue

B. Fordyce granules

C. Mucosal pemphigoid

D. Leukoedema

38. A patient develops fragile oral bullae that rupture easily, leaving widespread painful erosions. Which disorder is classically associated with a positive Nikolsky sign?

A. Frictional keratosis

B. Pemphigus vulgaris

C. Linea alba

D. Nicotine stomatitis

39. A unilateral painful vesicular eruption follows a dermatomal distribution and does not cross the midline. Which infection is most likely?

A. Primary herpetic gingivostomatitis

B. Herpes zoster (shingles)

C. Recurrent aphthous stomatitis

D. Hand-foot-and-mouth disease

40. A fluctuant swelling adjacent to a tooth with deep periodontal probing and a vital pulp is most consistent with which diagnosis?

A. Acute periodontal abscess

B. Radicular cyst from pulpal necrosis

C. Periapical granuloma from a nonvital tooth

D. Traumatic ulcer of the attached gingiva

41. Multiple mixed radiolucent-radiopaque lesions around vital mandibular anterior teeth in a middle-aged adult are most characteristic of which condition?

A. Periapical cemento-osseous dysplasia

B. Multiple periapical abscesses

C. Dentigerous cysts

D. Odontogenic keratocysts

42. A well-circumscribed radiolucency surrounding the crown of an unerupted tooth and attaching near the CEJ most strongly suggests what?

A. Residual cyst in an edentulous site

B. Lateral periodontal cyst beside a vital root

C. Dentigerous odontogenic cyst

D. Simple bone cyst between vital roots

43. Which odontogenic tumor is locally aggressive, usually benign, and often presents as a multilocular radiolucency in the posterior mandible?

A. Odontoma

B. Cementoblastoma

C. Ameloblastoma

D. Peripheral ossifying fibroma

44. Persistent dry mouth and dry eyes accompanied by autoimmune salivary and lacrimal gland dysfunction suggest which condition?

A. Sjogren syndrome

B. Bell palsy

C. Paget disease

D. Behcet disease

45. Poorly controlled diabetes can contribute to periodontal destruction primarily through which mechanism?

A. Altered inflammatory response and impaired wound healing

B. Complete elimination of neutrophils from blood

C. Salivary hypofunction as the primary periodontal pathway

D. Direct conversion of plaque into calculus

46. A smooth, painful, erythematous tongue can occur with iron deficiency because of which change?

A. Hyperplasia of circumvallate papillae

B. Calcification of minor salivary ducts

C. Hypertrophy of the lingual tonsils

D. Atrophy of lingual papillae

47. A patient has erythematous fissures at both corners of the mouth. Which local factor commonly contributes to angular cheilitis?

A. Excessive keratinization from toothbrushing

B. Occlusal enamel hypoplasia

C. Saliva pooling with Candida or bacterial overgrowth

D. Calcification of the parotid duct

48. Which antihypertensive drug class is most associated with a persistent dry cough?

A. Thiazide diuretics

B. Calcium channel blockers

C. Alpha-1 blockers

D. ACE inhibitors

49. Which cardiovascular medication class can contribute to gingival overgrowth in susceptible patients?

A. Nitrate vasodilator drugs

B. Statin lipid-lowering drugs

C. Loop diuretic drugs

D. Calcium channel blockers

50. A nonselective beta blocker may create concern in a patient with asthma because it can do what?

A. Increase salivary flow by stimulating muscarinic receptors

B. Increase metabolism of inhaled corticosteroid medication

C. Promote bronchoconstriction by blocking beta-2 receptors

D. Cause immediate anticoagulation through factor Xa inhibition

51. Warfarin exerts its anticoagulant effect primarily by interfering with what?

A. Platelet P2Y12 receptors

B. Vitamin K-dependent clotting factor synthesis

C. Direct thrombin cleavage of fibrin

D. Cyclooxygenase in peripheral pain fibers

52. Which laboratory value is used routinely to monitor warfarin therapy?

A. HbA1c percentage

B. INR blood test

C. Serum amylase level

D. Erythrocyte sedimentation rate

53. Low-dose aspirin reduces platelet aggregation primarily by irreversibly inhibiting which enzyme?

A. Monoamine oxidase in neurons

B. Angiotensin-converting enzyme

C. Cyclooxygenase-1 in platelets

D. Carbonic anhydrase in saliva

54. Clopidogrel decreases platelet aggregation by blocking which receptor?

A. Beta-2 adrenergic receptor

B. H1 histamine receptor

C. D2 dopamine receptor

D. P2Y12 ADP receptor

55. A patient with stable angina carries sublingual nitroglycerin. What is its principal therapeutic effect?

A. Bronchodilation through beta-2 stimulation

B. Vasodilation that reduces myocardial oxygen demand

C. Antiplatelet action through P2Y12 blockade

D. Immediate conversion of glucose into glycogen

56. Benzodiazepines reduce anxiety primarily by enhancing the action of which neurotransmitter?

A. Acetylcholine signaling

B. GABA inhibitory signaling

C. Glutamate signaling

D. Substance P signaling

57. Which adverse effect is most important when opioids are combined with other sedating medications?

A. Severe hyperthyroidism

B. Immediate gingival hyperplasia

C. Additive respiratory depression

D. Accelerated enamel remineralization

58. An early manifestation of excessive systemic local anesthetic exposure can include which neurologic symptom?

A. Circumoral numbness with tinnitus or agitation

B. Progressive jaundice without neurologic symptoms

C. Delayed gingival enlargement

D. Isolated tooth discoloration

59. Which medication is a direct factor Xa inhibitor?

A. Warfarin

B. Aspirin

C. Apixaban

D. Clopidogrel

60. Which antifungal is commonly prescribed as an oral suspension for localized oral candidiasis?

A. Acyclovir

B. Nystatin

C. Amoxicillin

D. Doxycycline

61. Which antiviral is commonly used for herpes simplex infections?

A. Fluconazole

B. Acyclovir

C. Cephalexin

D. Metronidazole

62. A patient reports dizziness when rising quickly from the dental chair. Which vital-sign assessment is most useful for evaluating suspected orthostatic hypotension?

A. Measure temperature after treatment

B. Record respiratory rate once while fully supine

C. Assess oxygen saturation after local anesthesia

D. Compare blood pressure and pulse after positional changes

63. During periodontal charting, the gingival margin is 3 mm apical to the CEJ and probing depth is 4 mm. What is the clinical attachment level at that site?

A. 1 mm

B. 3 mm

C. 7 mm

D. 4 mm

64. At a site with 6 mm probing depth, the gingival margin lies 2 mm coronal to the CEJ because of enlargement. How much attachment loss is present?

A. 2 mm

B. 6 mm

C. 8 mm

D. 4 mm

65. Which finding is most useful for determining whether a periodontal pocket is actively inflamed at the time of examination?

A. Tooth shade

B. Bleeding on probing

C. Width of attached gingiva alone

D. Presence of an old restoration

66. A narrow, isolated 9-mm probing depth on the distal surface of a mandibular molar should prompt evaluation for which local problem?

A. Generalized physiologic pigmentation

B. Vertical root fracture or localized defect

C. Normal eruption of an adjacent tooth

D. Fluorosis limited to enamel

67. Which instrument is designed specifically to measure furcation involvement on multirooted teeth?

A. Explorer 11/12

B. WHO probe

C. Nabers probe

D. Williams probe

68. When documenting tooth mobility, movement greater than 1 mm horizontally without vertical depressibility is commonly classified as which degree?

A. Class 0 mobility

B. Class I mobility

C. Class II mobility

D. Class III mobility

69. Which extraoral finding is most concerning when it is firm, fixed, painless, and persists for several weeks?

A. Transient cheek biting line

B. Enlarged cervical lymph node

C. Symmetric masseter prominence

D. Normal submandibular gland contour

70. A patient reports spontaneous gingival bleeding and easy bruising that began recently. Which history question should receive priority?

A. Favorite toothpaste flavor

B. Usual side of chewing

C. Preferred toothbrush color

D. Medication and bleeding history

71. Which finding most strongly supports a diagnosis of xerostomia rather than simply a subjective complaint of dry mouth?

A. Little pooled saliva with dry, sticky mucosa

B. Generalized physiologic melanin pigmentation

C. A single occlusal amalgam restoration

D. Bilateral linea alba

72. Which assessment finding is most consistent with bruxism?

A. Generalized cervical abrasion without matching wear facets

B. Uniform gingival enlargement without plaque

C. Isolated developmental enamel pit

D. Matching wear facets on opposing teeth

73. When assessing a suspicious oral lesion, which documentation is most clinically useful for future comparison?

A. Precise lesion description and photograph

B. A note that the lesion looked unusual

C. The patient's occupation without lesion details

D. A statement that the lesion was probably low risk

74. A mandibular molar has a 5-mm probing depth and 4 mm of recession. Which value best represents attachment loss?

A. 1 mm

B. 4 mm

C. 5 mm

D. 9 mm

75. Which sign is most characteristic of acute inflammation rather than chronic fibrotic gingiva?

A. Firm pale tissue with stippling

B. Soft tissue with redness and edema

C. Dense collagen with minimal bleeding

D. Knife-edged margins without swelling

76. A patient reports intermittent clicking in the TMJ without pain or limited opening. Which initial approach is most appropriate during a hygiene visit?

A. Attempt forceful manipulation of the joint

B. Diagnose internal derangement without further evaluation

C. Avoid recording the finding because it is asymptomatic

D. Document the finding and screen for functional symptoms

77. Which finding most strongly suggests a need to reassess a patient's periodontal risk level?

A. Unchanged eye color

B. Smoking with increased BOP

C. Stable tooth morphology

D. Use of a different brand of floss

78. A patient has generalized 3-mm probing depths but heavy bleeding on probing and no attachment loss. Which condition is most consistent?

A. Stage IV periodontitis

B. Necrotizing periodontitis

C. Plaque-induced gingivitis

D. Peri-implantitis

79. Which feature is most useful for distinguishing gingival recession from a periodontal pocket caused by coronal displacement of the gingival margin?

A. Patient age alone

B. Gingival margin relative to the CEJ

C. Tooth color alone

D. Presence of saliva in the vestibule

80. Which assessment finding is most consistent with trauma from occlusion?

A. Mobility with fremitus during function

B. Generalized candidal plaques

C. Bilateral angular cheilitis

D. Diffuse salivary gland enlargement

81. A patient with a history of head and neck cancer presents for maintenance. Which history update is most important before instrumentation?

A. Childhood orthodontic appliance color

B. Radiation details and current oncology status

C. Preferred chewing side before cancer therapy

D. Past brand of manual toothbrush

82. Which intraoral receptor placement is most appropriate for evaluating crestal bone levels and interproximal caries in posterior teeth?

A. Maxillary anterior occlusal image

B. Horizontal bitewing

C. Lateral cephalometric image

D. Submentovertex projection

83. For a patient with known moderate-to-severe periodontal bone loss, which bitewing orientation can provide greater vertical coverage of alveolar bone?

A. Vertical bitewing

B. Reverse Towne projection

C. Cross-sectional occlusal view

D. Waters projection

84. A periapical image shows foreshortened roots. Which error is the most likely cause when using the bisecting-angle technique?

A. Insufficient horizontal angulation

B. Receptor placed too far distally

C. Exposure time set slightly too low

D. Excessive vertical angulation

85. Interproximal contacts are overlapped on a bitewing image. Which correction is needed?

A. Increase vertical angulation substantially

B. Decrease receptor sensitivity

C. Adjust horizontal angulation through the contacts

D. Place the receptor outside the mouth

86. A digital image is excessively dark because of unnecessary receptor exposure. Which operator change is most appropriate?

A. Repeat the image using a higher receptor exposure

B. Increase cone diameter to include more tissue

C. Use a lower source-to-skin distance

D. Reduce exposure settings while maintaining diagnostic quality

87. Which factor most effectively reduces patient radiation dose during intraoral imaging without reducing the diagnostic field needed?

A. Increasing beam diameter

B. Routine retakes for minor positioning errors

C. Rectangular collimation

D. Using slower image receptors

88. A cone-cut artifact occurs when what happens?

A. The patient swallows during exposure

B. The receptor is exposed to visible light

C. The vertical angulation is generally too steep

D. The x-ray beam is not centered over the receptor

89. Which radiographic finding is most consistent with horizontal periodontal bone loss?

A. Parallel but apically displaced crestal bone

B. A narrow angular defect extends down one root surface

C. A uniform increase in enamel radiopacity

D. Localized loss of lamina dura around selected teeth

90. Which appearance most strongly suggests cervical burnout rather than root caries?

A. Diffuse cervical radiolucency with intact surface

B. Definite cavitation confirmed clinically

C. Irregular radiolucency extending into exposed root dentin

D. Radiolucency associated with a soft root surface

91. A panoramic image shows a broad radiopaque band superimposed over the maxillary apices because the patient failed to keep the tongue against the palate. What is the band?

A. Mental foramen

B. Zygomatic process

C. Palatoglossal air space

D. Mandibular canal

92. If a patient is positioned too far back in the panoramic focal trough, how do anterior teeth typically appear?

A. Narrowed and blurred

B. Normal width but substantially absent

C. Foreshortened in the molar region

D. Widened and blurred

93. Which principle should guide the decision to prescribe dental radiographs?

A. Clinically individualized radiograph selection

B. Routine full-mouth series at fixed recall intervals

C. Age-based imaging intervals without disease-risk assessment

D. Imaging after symptoms become severe

94. Which radiographic feature most supports a diagnosis of calculus?

A. Uniform radiolucent halo around enamel

B. Small radiopaque projections attached to proximal root surfaces

C. Diffuse reduction in trabecular bone density

D. Radiopaque line inside the pulp chamber

95. Which technique error can cause an apical area to be missing from a periapical image?

A. Correct receptor placement with proper beam alignment

B. Use of a rectangular collimator

C. Inadequate receptor placement beyond the tooth apex

D. Proper parallel alignment of receptor and tooth

96. Why should radiographic retakes be minimized?

A. Repeated exposure shortens the useful life of digital sensors

B. They are prohibited even when a diagnostic image was not obtained

C. They prevent the clinician from comparing previous images

D. Avoid unnecessary repeat radiation exposure

97. Which sequence best reflects comprehensive dental hygiene care planning?

A. Planning, assessment, evaluation, implementation, diagnosis

B. Implementation, diagnosis, assessment, planning, evaluation

C. Evaluation, implementation, planning, diagnosis, assessment

D. Assessment, dental hygiene diagnosis, planning, implementation, evaluation

98. A patient has generalized heavy calculus with inflammation. What is the primary clinical goal of nonsurgical periodontal therapy?

A. Remove a uniform layer of cementum from instrumented roots

B. Reduce pocket depth mainly through aggressive root planing

C. Subgingival biofilm and calculus removal

D. Polish exposed roots to a glassy surface after debridement

99. Which instrument is best designed for subgingival instrumentation of posterior proximal root surfaces?

A. Sickle scaler with a pointed back

B. Universal hoe used supragingivally

C. Area-specific Gracey curet

D. Rubber cup polisher

100. When adapting a Gracey curet, which portion of the cutting edge should remain in contact with the tooth?

A. Entire face and back simultaneously

B. Terminal shank

C. Upper one third of the opposite cutting edge

D. Lower one third of the working end

101. During an activated curet stroke for tenacious calculus, which blade-to-root angle should the clinician establish?

A. Approximately 70 to 80 degrees

B. Approximately 0 to 10 degrees

C. Approximately 20 to 30 degrees

D. Approximately 110 to 130 degrees

102. Which stroke characteristic is most appropriate for calculus removal?

A. Long feather-light exploratory stroke

B. Uncontrolled push stroke toward soft tissue

C. Circular polishing stroke with no cutting edge

D. Short, controlled pull stroke with firm lateral pressure

103. Which tactile cue best helps identify subgingival calculus with an explorer?

A. A perfectly smooth continuous surface

B. A rough or raised interruption along the root surface

C. Uniform softness of attached gingiva

D. A pulse transmitted through the instrument handle

104. What is the purpose of using a modified pen grasp during instrumentation?

A. Eliminate the need for a fulcrum

B. Improve control, sensitivity, and stability of the instrument

C. Increase wrist tension as much as possible

D. Prevent any finger movement during adaptation

105. A stable intraoral fulcrum primarily provides what benefit during scaling?

A. More rapid hand fatigue

B. Greater dependence on shoulder motion

C. Instrument control and soft-tissue protection

D. Elimination of tactile sensitivity

106. Which instrument feature is characteristic of a sickle scaler?

A. Pointed tip and triangular cross-section

B. Rounded toe and semicircular cross-section

C. Flexible plastic tip for implant probing

D. Ball-ended tip with colored periodontal markings

107. Which feature is characteristic of a universal curet?

A. Two cutting edges per working end with a face at 90 degrees to the terminal shank

B. One lower cutting edge with a face offset from the terminal shank

C. Pointed tip with a triangular cross-section

D. Diamond-coated blade used for crown preparation

108. Which ultrasonic tip orientation is most appropriate during periodontal instrumentation?

A. Press the terminal point directly into cementum

B. Hold the entire tip stationary in one spot

C. Use maximum lateral pressure continuously

D. Lateral tip adaptation with light contact

109. Why is continuous water flow important during ultrasonic instrumentation?

A. It cools the tip and helps flush the treatment area

B. It sterilizes the instrument inside the mouth

C. It replaces the need for infection-control barriers

D. It substantially eliminates aerosol production

110. A patient with a cardiac pacemaker requires powered instrumentation. What is the best approach?

A. Substitute hand instrumentation without checking the device type

B. Proceed with any ultrasonic scaler based on modern shielding alone

C. Deactivate the pacemaker before treatment

D. Review the device and manufacturer guidance before selecting equipment

111. Which finding at periodontal reevaluation most strongly indicates a favorable response to nonsurgical therapy?

A. Reduced bleeding on probing and improved plaque control

B. More generalized edema and spontaneous bleeding

C. Increasing probing depths at multiple sites

D. New suppuration from previously stable pockets

112. When should periodontal reevaluation occur after initial nonsurgical therapy?

A. Immediately before any healing can occur

B. after several years regardless of disease severity

C. rarely if calculus was removed successfully

D. After initial periodontal healing

113. Which combination of residual findings most strongly justifies increasing the frequency of supportive periodontal care?

A. Excellent plaque control and stable shallow probing

B. No history of periodontal disease and low caries risk

C. Persistent bleeding, deep residual pockets, and poor plaque control

D. Stable tissues with consistent self-care over years

114. What is the primary purpose of periodontal maintenance after active therapy?

A. predict that periodontitis can rarely recur

B. Replace the need for daily home care

C. Avoid measuring probing depths in treated areas

D. Prevent recurrence through supportive maintenance

115. A root surface becomes sensitive after periodontal instrumentation. Which mechanism commonly contributes?

A. Exposed dentinal tubules transmit stimuli to the pulp

B. New enamel forms over the root surface

C. Irreversible pulpal inflammation after routine root exposure

D. Cementum thickens enough to compress the nerve

116. Which agent is commonly used professionally to reduce dentinal hypersensitivity by promoting tubule occlusion or neural desensitization?

A. Undiluted sodium hypochlorite

B. Etching gel left on exposed dentin

C. Strong acid solution to widen tubules

D. Fluoride varnish or another desensitizing agent

117. Which polishing approach is most appropriate for a patient with minimal stain and no heavy plaque after debridement?

A. Polish the full dentition routinely after debridement

B. Choose a coarse paste when stain is present on exposed roots

C. Selective polishing only where clinically indicated

D. Polishing before calculus removal to hide deposits

118. Which polishing agent is generally preferred on exposed root surfaces when polishing is necessary?

A. Least abrasive agent that accomplishes the objective

B. Most abrasive paste available

C. Pumice with prolonged heavy pressure

D. Acidic etchant to increase surface roughness

119. Why should air-powder polishing be used cautiously around certain restorative materials and exposed roots?

A. The device rarely removes biofilm

B. Powder abrasiveness is clinically unimportant on exposed dentin

C. It cannot be used anywhere in the oral cavity

D. Some powders can abrade surfaces or alter restoration finish

120. Which implant debridement principle is most appropriate?

A. Use stainless-steel scalers with firm pressure on titanium surfaces

B. Limit professional care to supragingival polishing around implants

C. Polish implant surfaces with the most abrasive paste available

D. Implant-safe professional biofilm debridement technique

121. Which finding around an implant is most consistent with peri-implant mucositis rather than peri-implantitis?

A. Progressive radiographic bone loss with inflammation

B. Bleeding without progressive peri-implant bone loss

C. Implant mobility from loss of osseointegration

D. Suppuration with increasing bone destruction

122. A patient has necrotizing gingival lesions with pain and interdental papilla necrosis. What should initial care emphasize?

A. Aggressive subgingival surgery at the first visit

B. Postpone debridement until the acute pain has fully resolved

C. Gentle debridement plus risk-factor evaluation

D. Polish and omit biofilm disruption

123. Which feature distinguishes a periodontal abscess from uncomplicated chronic pocket inflammation?

A. generalized plaque without symptoms

B. Uniform physiologic pigmentation

C. Localized purulent periodontal infection

D. Stable shallow probing with no bleeding

124. What is the purpose of root surface evaluation after instrumentation?

A. Confirm that a thin layer of root surface has been removed

B. Create a mirror-like root by aggressive planing

C. Verify that pocket depth falls immediately after instrumentation

D. Check for residual deposits or roughness

125. Which ergonomic principle helps reduce musculoskeletal strain during instrumentation?

A. Sustained neck flexion to improve visibility

B. Elevated shoulders throughout the appointment

C. Twisting the torso instead of moving the chair

D. Neutral posture with frequent repositioning of patient and operator

126. Which action improves visibility while reducing the need for excessive operator bending?

A. Lean closer with maximal neck flexion

B. Use indirect vision and reposition the patient or light

C. Hold the mirror without retraction

D. Maintain one patient position and compensate by operator movement

127. Which fluoride mechanism is most important after tooth eruption?

A. Pre-eruptive incorporation into developing enamel

B. Direct elimination of cariogenic bacteria from plaque

C. Topical remineralization with less demineralization

D. Complete replacement of saliva as a buffer

128. Which patient is most likely to benefit from prescription-strength home fluoride toothpaste?

A. Adult with low caries risk and excellent salivary flow

B. Adult with xerostomia and recurrent root caries

C. Adult with extrinsic stain but no active caries lesions

D. Low-risk adult who prefers products without fluoride

129. What is the primary purpose of a pit-and-fissure sealant?

A. Whiten intrinsic discoloration

B. Seal susceptible pits from cariogenic biofilm

C. Replace missing proximal tooth structure

D. Treat pulpal inflammation in deep caries

130. Which tooth surface is the best candidate for a sealant?

A. Large cavitated lesion requiring restoration

B. Smooth facial surface with no defect

C. Root surface with active abrasion

D. Deep noncavitated pit or fissure

131. For a patient with high caries activity, which dietary behavior most increases risk?

A. Eating a balanced meal at regular times

B. Frequent fermentable-carbohydrate snacks

C. Drinking plain water between meals

D. Choosing unsweetened dairy with meals

132. Which sugar alcohol is considered noncariogenic and may be used as a sucrose substitute in gum?

A. Xylitol

B. Sucrose

C. Maltose

D. Fructose

133. A patient has fixed orthodontic appliances and generalized plaque retention. Which self-care aid is particularly useful for cleaning beneath arch wires?

A. Interdental brush or orthodontic brush designed for the appliance

B. Hard-bristle brush with forceful scrubbing

C. Single-tuft brush used from the occlusal side of brackets

D. Abrasive polishing paste used at home

134. Which brushing method is commonly taught to direct bristles toward the gingival sulcus for plaque removal at the gingival margin?

A. Fones technique for occlusal surfaces

B. Charters technique with bristles directed away from interproximal areas

C. Horizontal scrub with heavy pressure

D. Bass sulcular toothbrushing technique

135. Which recommendation is most appropriate for an adult with exposed roots and abrasion from aggressive brushing?

A. Switch to a hard brush and increase pressure

B. Use a coarse abrasive powder daily

C. Soft brush with light pressure

D. Brush exposed roots once per week

136. Which interdental aid is generally most appropriate for an open embrasure with exposed root surfaces?

A. Floss forced through a wide space as the option

B. Interdental brush sized to fit without trauma

C. Sharp wooden instrument used subgingivally

D. No interdental cleaning because the space is open

137. Which instruction is most useful for a patient with removable partial dentures?

A. Wear it continuously day and night without removal

B. Clean it with boiling water to sterilize acrylic

C. Remove the prosthesis daily for thorough cleaning and inspect supporting tissues

D. Use household bleach at full strength on metal components

138. Why is overnight removal of many removable dentures recommended?

A. Remove the denture daily for tissue rest and cleaning

B. It lowers candidal risk by keeping the denture base dry overnight

C. It causes the denture base to become more retentive

D. It eliminates the need for recall examinations

139. Which behavior-change strategy is most consistent with motivational interviewing?

A. Lecture the patient until they agree

B. Use shame to increase compliance

C. Choose goals without asking the patient

D. Elicit the patient's own reasons for change

140. A patient says, “I know I should floss, but I never remember.” Which response best supports collaborative goal setting?

A. Insist on a complex routine immediately

B. Explain that forgetting proves lack of motivation

C. Patient-chosen cue for the new habit

D. Avoid discussing barriers because they are personal

141. Which recommendation is most appropriate for a patient with chronic xerostomia?

A. Hydration, saliva support, and fluoride prevention

B. Frequent sugar-containing candies to stimulate saliva

C. Alcohol-containing mouthrinse several times daily

D. Restrict between-meal fluids to reduce oral moisture exposure

142. Which type of chewing gum is most appropriate for stimulating saliva in a patient with residual salivary function?

A. Sugar-free chewing gum

B. Sucrose-sweetened gum

C. Sticky caramel candy

D. Acidic fruit chew with added sugar

143. Which home-care measure is especially important for a patient with high root-caries risk?

A. Avoid cleaning the cervical areas

B. Daily fluoride exposure focused on exposed root surfaces

C. Use a whitening toothpaste with no fluoride

D. Apply acidic beverages to the root surfaces

144. A patient drinks sports beverages throughout the day. Which counseling point best addresses erosion risk?

A. Reduce frequency and avoid prolonged sipping of acidic drinks

B. Brush promptly after acidic drinks to remove residual plaque

C. Hold the drink in the mouth before swallowing

D. Switch to another acidic beverage with the same pH

145. After an acidic exposure, why may immediate aggressive brushing be discouraged?

A. Acid markedly hardens enamel before brushing

B. Temporarily softened enamel can be more susceptible to mechanical wear

C. Brushing mechanically neutralizes residual surface acid

D. Toothpaste cannot contact enamel after an acidic drink

146. Which caries-management principle is most appropriate for a noncavitated early enamel lesion?

A. Restore noncavitated lesions early to prevent progression

B. Control disease activity with fluoride, plaque management, diet, and monitoring

C. Monitor until cavitation before beginning disease-control therapy

D. Use a high-abrasive polishing paste to remove enamel

147. A patient becomes pale, sweaty, and lightheaded immediately after injection and briefly loses consciousness. Which emergency is most likely?

A. Anaphylaxis

B. Hyperglycemic crisis

C. Stroke

D. Vasovagal syncope

148. What is the initial positioning for uncomplicated vasovagal syncope when no contraindication exists?

A. Upright with the head flexed forward

B. Prone with the face down

C. Supine with legs elevated

D. Standing to restore circulation

149. A conscious patient with diabetes develops tremor, sweating, hunger, and confusion during treatment. What should be given promptly if the patient can swallow safely?

A. A long-acting sedative

B. A dose of warfarin

C. Fast-acting oral glucose

D. An antihistamine

150. A patient with known asthma begins wheezing and has difficulty breathing during treatment. Which medication should be used first if available and prescribed for the patient?

A. Albuterol rescue inhaler

B. Sublingual nitroglycerin

C. Oral aspirin

D. Topical fluoride varnish

151. Minutes after allergen exposure, a patient develops urticaria, bronchospasm, and falling blood pressure. Which drug should be administered first?

A. Diphenhydramine as the first treatment

B. Intramuscular epinephrine

C. Oral ibuprofen

D. Sublingual nitroglycerin

152. A patient reports crushing chest pressure that persists after rest and prescribed nitroglycerin. What is the priority response?

A. Continue routine instrumentation

B. Ask the patient to drive home

C. Activate EMS for suspected acute coronary syndrome

D. Delay action until the appointment ends

153. Which sign is most suggestive of a stroke and requires immediate emergency activation?

A. Gradual tooth staining over months

B. Chronic mild gingival recession

C. Sudden facial droop, weakness, and dysarthria

D. Long-standing torus palatinus

154. A patient begins having a generalized tonic-clonic seizure in the dental chair. What is the first priority?

A. Place an instrument between the teeth

B. Protect from injury and maintain a safe airway

C. Hold the patient down firmly

D. Continue treatment until the seizure ends

155. Which finding is most concerning for adrenal crisis in a patient with adrenal insufficiency?

A. Localized plaque without inflammation

B. Hypotension with weakness and confusion

C. Mild extrinsic stain

D. Stable blood pressure with no symptoms

156. Which appointment planning principle is most appropriate for a patient with well-controlled type 1 diabetes?

A. Ask the patient to fast so glucose can be checked accurately

B. Advise skipping insulin routinely

C. Maintain usual meals and medications

D. Schedule after prolonged vigorous exercise

157. A patient taking anticoagulant medication requires nonsurgical periodontal instrumentation. What is the best general approach?

A. Tell the patient to discontinue the drug without consulting the prescriber

B. Defer dental hygiene care until anticoagulant therapy is completed

C. Review anticoagulant risk; do not stop it independently

D. Use the same coagulation test to guide each anticoagulant drug

158. A patient on hemodialysis has an arteriovenous fistula in the left arm. Which precaution is appropriate?

A. Use the fistula arm because it has stronger blood flow

B. Avoid blood pressure cuffs and venipuncture on the fistula arm

C. Compress the fistula during treatment

D. Compress the vascular access briefly during medical assessment

159. For a patient receiving hemodialysis, why is dental treatment often preferred on a nondialysis day?

A. It can reduce concerns related to dialysis-associated heparinization and fatigue

B. Dialysis markedly sterilizes the bloodstream

C. Dialysis rapidly clears local anesthetic and reduces its duration

D. Blood pressure cannot be measured on any nondialysis day

160. Which finding in a patient with chronic obstructive pulmonary disease may favor a more upright treatment position?

A. Dyspnea that worsens when lying flat

B. Excellent tolerance of the supine position

C. No respiratory symptoms at any time

D. Normal nasal anatomy

161. A patient with a recent history of unstable angina presents for elective periodontal maintenance. What is the safest action?

A. Proceed with lengthy elective care without modification

B. Use stress to test cardiac reserve

C. Defer elective care for medical evaluation

D. Proceed when symptoms are absent at the start of the appointment

162. Which infection-control principle requires treating blood and certain body fluids as potentially infectious regardless of a patient's known diagnosis?

A. Reverse isolation

B. Selective precautions based on appearance

C. Standard Precautions

D. Radiation protection protocol

163. When should hand hygiene be performed in clinical dental hygiene care?

A. Before and after contact and after glove removal

B. at the beginning of the workday

C. when hands look visibly dirty

D. Perform hand hygiene after the clinical session rather than between patients

164. Which item is classified as critical because it penetrates soft tissue or bone?

A. Blood pressure cuff

B. Periodontal surgical instrument

C. Protective eyewear

D. Dental chair control button

165. A reusable mouth mirror contacts mucous membranes but does not penetrate tissue. How is it classified?

A. Critical surgical implant

B. Noncritical environmental surface

C. Single-use housekeeping item

D. Semicritical instrument

166. Which process should occur before sterilizing contaminated reusable instruments?

A. Packaging without cleaning

B. Cleaning to remove debris and organic material

C. Hand scrubbing with bare hands

D. Storing wet instruments indefinitely

167. What is the purpose of a chemical indicator placed inside an instrument package?

A. Prove sterility with the same certainty as a biological indicator

B. Show that sterilizing conditions reached the location of the indicator

C. Identify the patient who used the instrument

D. Use internal chemical indicators instead of mechanical cycle monitoring

168. Which action is most appropriate immediately after a needlestick from a contaminated instrument?

A. Squeeze the wound aggressively for several minutes

B. Base the response on the source patient's reported infection history

C. Wait until the end of the week to report it

D. Wash the area and follow the office exposure-control plan promptly

169. Which engineering control most directly reduces sharps injury risk?

A. Recapping needles with two hands

B. Safety-engineered sharps devices

C. Passing uncapped needles hand to hand

D. Bending needles before disposal

170. Which method is appropriate if a needle must be recapped before disposal?

A. One-handed scoop technique or a mechanical recapping device

B. Two-handed recapping near the needle tip

C. Holding the cap in the opposite hand

D. Bending the needle before placing the cap

171. A patient refuses recommended radiographs after receiving information about benefits and risks. Which ethical principle supports the patient's decision-making authority?

A. Nonmaleficence

B. Justice

C. Veracity

D. Autonomy

172. A clinician intentionally withholds a material risk to persuade a patient to accept treatment. Which ethical principle is most directly violated?

A. Fidelity to a schedule

B. Aesthetic beneficence

C. Distributive efficiency

D. Professional veracity

173. Which element is essential for valid informed consent?

A. The clinician chooses on the patient's behalf without discussion

B. A competent patient receives understandable information and voluntarily agrees

C. A signature alone regardless of understanding

D. Consent obtained after treatment is completed

174. Which action best protects patient confidentiality when discussing a case with another professional?

A. Discuss identifiable details in a public elevator

B. Post the case on social media without permission

C. Share only necessary care information securely

D. Leave the full record open where visitors can read it

175. A hygienist notices a charting error after signing the clinical note. What is the appropriate documentation approach?

A. Delete the original entry so it cannot be traced

B. Alter the time stamp to make the correction appear original

C. Transparent correction preserving the original entry

D. Leave the entry unchanged and add a correction at the next visit

176. A clinician recognizes that a requested procedure is outside the legal scope of dental hygiene practice in the jurisdiction. What is the appropriate response?

A. Decline and follow legal scope limits

B. Perform it if the patient signs a waiver

C. Perform it if the office is busy

D. Ask another hygienist to do it without authorization

177. During one school year, investigators count only children who newly develop caries. Which epidemiologic measure are they calculating?

A. Incidence

B. Prevalence

C. Mortality ratio

D. Case fatality

178. A survey records the proportion of nursing-home residents who currently have untreated root caries. Which disease-frequency measure is being estimated?

A. Incidence density

B. Relative risk

C. Attributable fraction

D. Point prevalence

179. In an epidemiologic study, a confounding variable is one that does what?

A. generally lies on the causal pathway and should rarely be considered

B. Related to both the exposure and the outcome

C. Occurs because of random sampling error

D. Is identical to the study outcome

180. Which study design begins with people who have a disease and people who do not, then looks backward for prior exposures?

A. Case-control study

B. Randomized clinical trial

C. Prospective cohort study

D. Cross-sectional survey

181. Researchers classify adults by tobacco exposure and then observe both groups for several years to compare new periodontal disease. What study design is this?

A. Cohort study

B. Case report

C. Ecologic snapshot

D. Diagnostic case series

182. Which feature best distinguishes a randomized controlled trial from an observational cohort study?

A. Participants are generally selected after the outcome occurs

B. Investigators assign the intervention by random allocation

C. No comparison group is permitted

D. prevalence can be measured

183. What does a p value represent in a standard null-hypothesis significance test?

A. Probability of such data under the null model

B. Probability that the research hypothesis is definitely correct

C. Percentage of participants who received the intervention

D. Size of the clinical effect by itself

184. A 95% confidence interval for a mean difference does not include zero. What does this generally imply in a conventional two-sided test at alpha 0.05?

A. The effect is necessarily clinically important

B. There is no sampling uncertainty

C. Statistically significant at the 0.05 threshold

D. The study is free of bias

185. Which statistic best describes the middle value in an ordered data set?

A. Median

B. Mean

C. Variance

D. Standard deviation

186. Which measure describes the average squared deviation of observations from the mean?

A. Median

B. Mode

C. Variance

D. Sensitivity

187. A screening test with high sensitivity is especially useful because it has what property?

A. It reduces the number of false-positive screening results

B. It detects a high proportion of people who truly have the condition

C. It increases specificity when disease prevalence is low

D. It measures disease severity rather than detection

188. A test with high specificity has which characteristic?

A. It creates many false positives by definition

B. Correctly identifies people without disease

C. It generally has high sensitivity too

D. It measures the prevalence of disease directly

189. Positive predictive value is strongly influenced by which population characteristic?

A. Underlying disease prevalence

B. Calendar month

C. Alphabetical order of participants

D. Whether the researcher prefers the test

190. Which type of sampling gives every member of the target population a known, nonzero chance of selection?

A. Convenience sampling

B. Volunteer sampling

C. Snowball sampling

D. Probability sampling

191. Which sampling method selects participants because they are easiest to access?

A. Simple random sampling

B. Systematic probability sampling

C. Stratified random sampling

D. Convenience sampling

192. What is the primary purpose of a needs assessment before planning a community oral-health program?

A. Choose an intervention before learning about the population

B. Measure the program budget after completion

C. Identify priority problems, affected groups, resources, and barriers

D. Base program priorities on national averages rather than local stakeholder input

193. Which program objective is written most appropriately?

A. Participants will understand oral health better

B. 70% demonstrate correct brushing by six months

C. The program will be very successful

D. Everyone will improve as much as possible

194. Process evaluation asks primarily which question?

A. Did long-term disease prevalence change years later?

B. Was the program implemented as planned?

C. Was the study hypothesis statistically significant?

D. Which individual has the highest caries risk?

195. Outcome evaluation of a school sealant program would most appropriately measure what?

A. Whether staff arrived on time

B. Number of boxes delivered to the clinic

C. Sealant coverage or caries outcomes

D. Color of the educational handouts

196. Which index is commonly used to summarize lifetime dental caries experience in permanent teeth?

A. Plaque Control Record

B. Gingival bleeding time

C. Community Periodontal Index

D. DMFT caries-experience index

197. Community water fluoridation is an example of which prevention level?

A. Secondary prevention

B. Primary prevention

C. Tertiary rehabilitation

D. Palliative care

198. Screening for previously undetected oral disease in an asymptomatic population is an example of which prevention level?

A. Secondary prevention

B. Primary prevention

C. Tertiary prevention

D. Quaternary prevention

199. Which ethical requirement is central when conducting human-subject research?

A. Withholding material risks from participants

B. Publishing identifiable records without permission

C. Informed consent and protection of participant welfare

D. Selecting participants primarily for investigator convenience

200. Which source generally provides the highest level of synthesized evidence for a focused clinical question when it is rigorous and current?

A. High-quality systematic review with meta-analysis

B. Single unsourced opinion

C. Advertisement from a product manufacturer

D. One anecdotal case report regardless of question

201. Case 1 (Questions 201-210): A 29-year-old patient is 24 weeks pregnant and has recently diagnosed gestational diabetes controlled with diet. She reports bleeding gums and nausea with morning brushing. Examination shows generalized erythematous gingiva, heavy posterior plaque, no attachment loss, and several areas of enamel erosion on the palatal surfaces of maxillary anterior teeth. Which periodontal condition best fits the clinical findings?

A. Pregnancy-associated plaque-induced gingivitis

B. Generalized stage III periodontitis

C. Necrotizing periodontitis

D. Drug-induced gingival enlargement

202. Case 1: Which factor most directly explains why gingival inflammation may be more pronounced during pregnancy?

A. Pregnancy eliminates oral neutrophil function

B. The fetus directly causes calculus formation

C. Hormonal amplification of plaque inflammation

D. Saliva becomes markedly sterile

203. Case 1: Which appointment position is generally most comfortable later in pregnancy if the patient becomes lightheaded while fully supine?

A. Slightly upright or with a left lateral tilt

B. substantially flat with no positional adjustment

C. Prone with abdominal pressure

D. Standing during instrumentation

204. Case 1: Which self-care recommendation best addresses the patient's morning nausea while preserving plaque control?

A. Stop brushing until after delivery

B. Small soft brush at a better-tolerated time

C. Use a hard brush to finish more quickly

D. Rinse with a sugary beverage

205. Case 1: What is the most likely cause of the palatal enamel erosion?

A. Repeated gastric-acid exposure

B. Subgingival calculus on lingual roots

C. Excess fluoride during adulthood

D. Mechanical abrasion from floss

206. Case 1: After an episode of vomiting, which instruction is most appropriate?

A. Neutralizing rinse, then delayed brushing

B. Brush immediately with a highly abrasive paste

C. Hold acidic juice in the mouth to stimulate saliva

D. Avoid rinsing so saliva remains acidic

207. Case 1: Why is the gestational diabetes history important to periodontal care?

A. Defer elective dental care until glucose control has normalized

B. It eliminates the need for plaque control

C. It guarantees severe periodontitis will occur

D. Hyperglycemia-related inflammatory risk

208. Case 1: Which dietary counseling point supports both caries prevention and gestational diabetes management?

A. Sip sweetened drinks throughout the day

B. Use small sugar-containing snacks to control nausea between meals

C. Fewer sugary snacks with regular balanced meals

D. Avoid most carbohydrate-containing foods throughout pregnancy

209. Case 1: Which finding would require prompt obstetric or medical consultation before routine care continues?

A. Severe hypertension with neurologic symptoms

B. Mild localized plaque

C. Physiologic tooth mobility absent

D. Stable gingivitis with no systemic symptoms

210. Case 1: What is the primary periodontal treatment priority for this patient?

A. Improve daily plaque control and provide indicated professional debridement

B. Postpone professional debridement until after delivery

C. Perform periodontal surgery despite no attachment loss

D. Prescribe systemic antibiotics for uncomplicated gingivitis

211. Case 2 (Questions 211-220): A 16-year-old with fixed orthodontic appliances has generalized marginal gingivitis and several chalky white-spot lesions adjacent to maxillary brackets. The patient drinks sweetened sports beverages during school and brushes once daily. No cavitation is detected. Which finding represents the earliest caries-related change in this case?

A. Irreversible pulpitis

B. Root fracture

C. Periapical cemento-osseous dysplasia

D. Noncavitated enamel demineralization

212. Case 2: Which local factor most contributes to the gingivitis?

A. Normal enamel fluorescence

B. Plaque retention around brackets and arch wires

C. Physiologic salivary buffering

D. Tooth eruption completed years earlier

213. Case 2: Which beverage change would most reduce the patient's caries and erosion challenge?

A. Sip sports drinks more slowly throughout the day

B. Hold acidic beverages around the brackets

C. Replace frequent sports drinks with water between meals

D. Add sugar to water for energy

214. Case 2: Which home-care aid is especially useful beneath orthodontic arch wires?

A. Coarse pumice on a dry toothbrush

B. Sharp scaler used at home

C. Hard brush with forceful horizontal scrubbing

D. Small interdental or orthodontic brush

215. Case 2: Which professional preventive intervention is most appropriate for the active white-spot lesions?

A. Immediate extraction of affected teeth

B. Topical fluoride combined with improved plaque and diet control

C. Aggressive enamel polishing until the spots disappear

D. Monitor the lesions without preventive intervention until cavitation

216. Case 2: Which brushing approach is most important around brackets?

A. Brush the occlusal surfaces

B. Angle bristles to clean both above and below bracket margins

C. Avoid the gingival margin to prevent bleeding

D. Use pressure high enough to bend the arch wire

217. Case 2: Why should the white-spot lesions be monitored after preventive therapy?

A. Serial change in lesion activity and surface

B. Assume persistence alone indicates that each white spot is active

C. Radiographs can rarely contribute to caries assessment

D. Enamel lesions cannot change after eruption

218. Case 2: Which motivational interviewing response is most appropriate?

A. Tell the patient lack of flossing is irresponsible

B. Select a complex regimen without discussion

C. Patient-chosen plan for a second daily brushing

D. Avoid asking about school routines or barriers

219. Case 2: Which finding would indicate progression requiring restorative evaluation?

A. Reduced plaque accumulation

B. A smoother glossy white lesion after control

C. New cavitation of the enamel lesion

D. Less gingival bleeding

220. Case 2: Which recall strategy is most appropriate while caries activity remains high?

A. Extend recall to several years

B. Stop monitoring until orthodontic treatment ends

C. Use the same long interval as a low-risk patient

D. Shorter risk-based recall for reassessment

221. Case 3 (Questions 221-230): A 74-year-old with Parkinson disease takes carbidopa/levodopa and several medications for hypertension. He has resting tremor, reduced manual dexterity, dry mouth, multiple exposed roots, and two new noncavitated root-surface lesions. His spouse assists with medications but the patient makes his own healthcare decisions. Which factor most directly increases this patient's root-caries risk?

A. Resting tremor without plaque retention

B. Normal physiologic pigmentation

C. Xerostomia combined with exposed root surfaces

D. Use of eyeglasses

222. Case 3: Which toothbrush modification is most likely to improve independent plaque control?

A. Very small hard brush requiring fine finger control

B. Use of a sharp explorer as a home-care tool

C. Avoidance of brushing on tremor days

D. Powered toothbrush with an enlarged or easy-grip handle

223. Case 3: Which interdental aid may be easier than floss when hand dexterity is limited and embrasures are open?

A. Unwaxed floss tied into very small knots

B. Metal scaler used by the patient

C. Interdental brush with an adapted handle

D. No interdental cleaning because roots are exposed

224. Case 3: Which preventive measure is especially important for the root lesions?

A. Daily acidic rinses

B. Abrasive polishing of the lesions

C. Avoid salivary stimulants because they may increase swallowing demands

D. Enhanced topical fluoride exposure

225. Because this patient with Parkinson disease can understand and decide about treatment, whose authorization is required for routine dental hygiene care?

A. The patient with intact decision-making capacity

B. The spouse routinely because Parkinson disease is present

C. The prescribing pharmacist

D. The dental assistant

226. Case 3: Which scheduling modification may improve treatment tolerance?

A. Schedule during best medication motor control

B. Schedule when medication effects have worn off

C. Require fasting before appointments

D. Use the longest possible appointment to reduce visits

227. Case 3: Which xerostomia recommendation is appropriate if the patient can safely chew gum?

A. Use frequent sucrose candies

B. Rinse repeatedly with alcohol-containing mouthwash

C. Limit water to avoid swallowing difficulty

D. Sugar-free salivary stimulants

228. Case 3: Which oral finding may be worsened by Parkinson-related swallowing and motor difficulty?

A. Accumulation of plaque and retained food debris

B. Development of extra teeth

C. Permanent enamel regeneration

D. Elimination of gingival inflammation

229. Case 3: Which caregiver strategy is most appropriate?

A. Have the spouse take over routine home care for greater efficiency

B. Transfer consent authority without legal basis

C. Teach the spouse assistance techniques with the patient's permission

D. Ask the spouse to change prescription doses

230. Case 3: Which outcome would best indicate that the preventive plan is working?

A. Lesions become softer and larger

B. New cavitation develops

C. Hard inactive root lesions with less plaque

D. Dry mouth becomes more severe with more sugar exposure

231. Case 4 (Questions 231-240): A 38-year-old with type 1 diabetes uses basal-bolus insulin. Recent HbA1c is 9.2%. Examination shows generalized 5- to 6-mm pockets, bleeding on probing, radiographic horizontal bone loss, and moderate calculus. The patient ate breakfast and took the usual insulin dose before the morning appointment. Which systemic factor is most likely to adversely affect periodontal healing?

A. Use of insulin itself

B. Poor glycemic control

C. Eating breakfast before treatment

D. Morning scheduling

232. Case 4: Which periodontal diagnosis category is most consistent with attachment and bone loss?

A. Plaque-free healthy periodontium

B. physiologic gingival pigmentation

C. Periodontitis rather than gingivitis alone

D. Pericoronitis without periodontal disease

233. Case 4: Why is confirming breakfast and insulin use important before treatment?

A. It determines the patient's tooth morphology

B. It helps assess risk for hypoglycemia during the appointment

C. It eliminates the need for vital signs

D. It proves the periodontal disease is inactive

234. Case 4: Which chairside sign would most strongly suggest hypoglycemia?

A. Slow development of calculus over months

B. Stable gingival recession

C. Sudden sweating, tremor, confusion, and hunger

D. Asymptomatic torus mandibularis

235. Case 4: If hypoglycemia occurs and the patient is conscious and can swallow, what is the first treatment?

A. Give additional rapid-acting insulin

B. Administer nitroglycerin

C. Give a rapidly absorbable oral carbohydrate

D. Provide water and continue treatment

236. How should this patient's active periodontitis be managed while glycemic control is being addressed medically?

A. Postpone periodontal therapy until HbA1c reaches the target range

B. Nonsurgical therapy with close reevaluation

C. Use antibiotics as the sole periodontal treatment

D. Avoid discussing diabetes with the patient

237. Case 4: Which home-care goal is most important?

A. Reduce brushing in bleeding areas until inflammation subsides

B. Use sweetened lozenges routinely to prevent low blood glucose

C. Cleaning on days with normal glucose

D. Consistent daily disruption of gingival and interdental plaque

238. Case 4: Which finding at reevaluation would indicate improvement?

A. Less bleeding and reduced pocket inflammation

B. New suppuration and deeper probing

C. More plaque at the gingival margin

D. Increasing tooth mobility

239. Case 4: Which statement best describes the diabetes-periodontitis relationship?

A. The conditions are substantially unrelated

B. Periodontitis occurs in patients who use insulin

C. Treating plaque routinely cures diabetes

D. Bidirectional diabetes-periodontitis relationship

240. How should supportive periodontal recall be scheduled while residual inflammation and poor glycemic control remain?

A. Use a fixed annual interval regardless of findings

B. Shorter risk-based periodontal recall

C. Stop probing because diabetes is present

D. Provide maintenance when pain occurs

241. Case 5 (Questions 241-250): A 46-year-old smokes about one pack of cigarettes daily and also vapes nicotine. He has generalized periodontal inflammation and a 1.2-cm non-wipeable white patch on the lateral tongue that has persisted for more than one month. The lesion is asymptomatic and has no obvious traumatic source. What is the most appropriate management of the persistent tongue lesion?

A. Observe because a painless white lesion is likely frictional keratosis

B. Polish the lesion until the surface is smooth

C. Wait several years before rechecking

D. Prompt referral for definitive evaluation and possible biopsy

242. Case 5: Which tobacco exposure most clearly increases the patient's risk for oral squamous cell carcinoma?

A. Use of fluoridated toothpaste

B. Combustible cigarette smoking

C. Drinking plain water

D. Daily interdental cleaning

243. Case 5: Which effect of smoking can complicate periodontal assessment?

A. Smoking increases gingival perfusion and visible bleeding

B. Smoking eliminates periodontal pathogens

C. Vasoconstriction may reduce visible gingival bleeding despite disease

D. Nicotine causes immediate enamel remineralization

244. Case 5: Which cessation approach is most appropriate in dental hygiene care?

A. Use shaming language to force a decision

B. Avoid the topic because tobacco is a personal choice

C. Recommend switching exclusively to another nicotine product without assessment

D. Assess readiness, advise cessation, and connect to support

245. Case 5: Which periodontal outcome is associated with continued smoking?

A. predicted elimination of gingival inflammation

B. Smoking improves postoperative tissue perfusion and healing

C. Smoking does not alter maintenance needs when plaque is controlled

D. Greater progression risk and poorer healing

246. Case 5: How should the tongue lesion be documented?

A. Precise lesion description and referral plan

B. Write “white spot” with no details

C. Omit the lesion because it is asymptomatic

D. Document a cancer diagnosis before biopsy

247. Case 5: Which statement about nicotine vaping is most appropriate?

A. It is low risk to oral tissues by definition

B. Ongoing nicotine dependence requiring assessment

C. It should rarely be documented as nicotine exposure

D. It guarantees successful cigarette cessation

248. Case 5: Which preventive strategy is most appropriate for the periodontal inflammation?

A. Prioritize lesion referral and defer periodontal care until biopsy results

B. Use whitening products instead of debridement

C. Avoid periodontal reevaluation while the patient smokes

D. Debridement, home care, and cessation support

249. Case 5: Which change would most increase urgency of the lesion referral?

A. A smoother surface after accidental trauma resolves

B. Stable dimensions with identified cheek-biting cause

C. Complete disappearance after irritant removal

D. Development of induration, ulceration, bleeding, or cervical nodes

250. Case 5: If the biopsy result is benign but smoking continues, what follow-up principle remains appropriate?

A. Stop examining the oral mucosa markedly

B. Treat recurrence at the same site as low risk after one benign biopsy

C. Ongoing cancer screening and cessation support

D. Avoid documenting tobacco use again

251. Case 6 (Questions 251-260): A 59-year-old with end-stage kidney disease receives hemodialysis Monday, Wednesday, and Friday through a left-arm arteriovenous fistula. He takes antihypertensives and phosphate binders. Oral findings include xerostomia, heavy calculus, gingival inflammation, and a metallic taste. The medical condition is stable. Which day is generally preferable for routine periodontal instrumentation?

A. During dialysis while the patient is anticoagulated

B. Immediately before dialysis regardless of symptoms

C. A nondialysis day, often the day after dialysis

D. on a day when the fistula is being accessed

252. Case 6: Which vital-sign precaution is required because of the arteriovenous fistula?

A. Do not place the blood pressure cuff on the fistula arm

B. Use the fistula arm because pressure improves flow

C. Use brief cuff compression over the fistula to verify access patency

D. Avoid measuring blood pressure anywhere

253. Case 6: Why may bleeding be greater on the day of dialysis?

A. Dialysis causes permanent platelet overproduction

B. Dialysis heparin can increase bleeding

C. Phosphate binders act as thrombolytic drugs

D. Dialysis removes circulating clotting factors and increases bleeding

254. Case 6: Which oral finding is compatible with reduced salivary flow in kidney disease and medication use?

A. Permanent enamel regeneration

B. Uremic changes reduce the oral bacterial burden substantially

C. Dry mucosa with increased caries risk

D. Salivary flow increases after dialysis as a compensatory response

255. Case 6: Which medication principle is especially important in advanced renal disease?

A. Consider renal clearance when drugs are prescribed or recommended

B. Usual drug dosing is unaffected when dialysis treatment is stable

C. Recommend systemic drugs without reviewing renal status

D. Increase usual doses because dialysis removes most medications

256. Case 6: Which professional care is most appropriate for the heavy calculus?

A. Thorough debridement with individualized staging if needed for tolerance

B. Leave calculus because kidney disease makes removal unsafe

C. Use polishing without deposit removal

D. Prescribe antibiotics instead of mechanical biofilm control

257. Case 6: Which home-care recommendation is appropriate for xerostomia?

A. Use frequent sugary lozenges

B. Fluoride, plaque control, and saliva support

C. Rinse with alcohol repeatedly to dry tissues further

D. Stop drinking permitted fluids altogether

258. Case 6: Which finding would justify communication with the nephrology team before elective care?

A. Recent bleeding or unstable dialysis status

B. Stable plaque-induced gingivitis

C. A long-standing torus mandibularis

D. One small area of extrinsic stain

259. Case 6: Why can calculus accumulation be prominent in some dialysis patients?

A. Dialysis converts enamel directly into calculus

B. Calculus forms without dental plaque

C. Altered salivary composition can favor mineralization of plaque

D. The fistula deposits calcium on teeth

260. Case 6: Which outcome best indicates successful periodontal maintenance?

A. Increasing suppuration and mobility

B. Less inflammation with stable attachment

C. New deep pockets at multiple sites

D. A temporary increase in bleeding reflects improved gingival perfusion

261. Case 7 (Questions 261-270): A 55-year-old with rheumatoid arthritis takes weekly methotrexate and low-dose prednisone. Hand pain and limited finger movement make flossing difficult. She has generalized plaque-induced gingivitis, no attachment loss, and several cervical restorations. Her rheumatologist reports stable disease. Which self-care modification best addresses limited hand dexterity?

A. Use a smaller handle that requires more finger control

B. Powered brush and enlarged interdental handle

C. Stop interdental cleaning substantially

D. Use a metal scaler at home

262. Case 7: Which periodontal diagnosis is most consistent with the current findings?

A. Plaque-induced gingivitis

B. Generalized periodontitis with attachment loss

C. Peri-implantitis

D. Necrotizing periodontitis

263. Case 7: Why is the methotrexate history clinically important?

A. It generally causes severe oral infection

B. It eliminates the need for a medical history

C. It functions as a local anesthetic

D. Possible immune or blood-count effects

264. Case 7: Which oral complaint would warrant prompt evaluation in a patient taking methotrexate?

A. Persistent ulcers with fever or infection

B. Stable linea alba

C. Physiologic melanin pigmentation

D. Asymptomatic mandibular tori

265. Case 7: Which consideration applies to chronic corticosteroid use?

A. It guarantees anaphylaxis to local anesthetics

B. Chronic steroids reduce gingival inflammation without infection effects

C. It makes blood pressure measurement unnecessary

D. Adrenal suppression and healing or infection effects

266. Case 7: Which appointment strategy may improve comfort for rheumatoid arthritis?

A. Keep joints in one uncomfortable position throughout care

B. Schedule very long visits without breaks

C. Provide supportive positioning and allow breaks for painful joints

D. Avoid using pillows or supports

267. Case 7: Which professional treatment is indicated for the gingivitis?

A. Biofilm and calculus removal with individualized self-care instruction

B. Periodontal surgery despite no attachment loss

C. Systemic antibiotics as routine monotherapy

D. Control systemic arthritis first because local plaque is secondary

268. Case 7: Which interdental device may be easier than string floss around cervical restorations?

A. Sharp explorer used with force

B. Coarse polishing disc at home

C. Avoid cleaning cervical restoration margins to prevent surface damage

D. Adapted interdental brush or floss holder

269. Case 7: Which finding at follow-up would indicate the plan is effective?

A. New generalized attachment loss

B. Increasing gingival edema

C. Less plaque and bleeding

D. More cervical plaque around restorations

270. Case 7: Which communication principle is best when recommending over-the-counter analgesics?

A. Use the usual analgesic dose without considering weekly methotrexate

B. Review current medications and contraindications before suggesting a drug

C. Recommend the maximum dose without history review

D. Tell the patient to stop prescription medication first

271. Case 8 (Questions 271-280): A 68-year-old former smoker has moderate COPD treated with tiotropium and an as-needed albuterol inhaler. He becomes short of breath when fully reclined and prefers two pillows at night. Today his oxygen saturation is 94% on room air and he is not wheezing. Which chair position is most appropriate?

A. Flat supine despite dyspnea

B. Semi-supine or more upright as tolerated

C. Trendelenburg for the entire appointment

D. Prone with the face downward

272. Case 8: Which medication should be readily accessible during care?

A. Warfarin tablets

B. Topical fluoride varnish

C. Albuterol rescue inhaler

D. Oral bisphosphonate

273. Case 8: Which medication can contribute to dry mouth in this patient?

A. Tiotropium inhaler

B. Topical fluoride

C. Local anesthetic gel used once

D. Plain water

274. Case 8: Which oral preventive strategy is important if xerostomia is present?

A. Intensify fluoride exposure and plaque control

B. Encourage frequent sugary candies

C. Use alcohol mouthrinse repeatedly

D. Reduce water intake without medical reason

275. Case 8: If the patient begins wheezing during treatment, what is the initial response?

A. Continue instrumentation until the quadrant is complete

B. Stop care and assist with the rescue inhaler

C. Lay the patient flatter to restrict movement

D. Give nitroglycerin for bronchospasm

276. Case 8: Which finding would justify deferring elective care?

A. Stable baseline oxygen saturation and no wheeze

B. Comfort in a semi-upright position

C. Acute COPD exacerbation

D. History of smoking cessation

277. Case 8: Why should long appointments be avoided if the patient fatigues easily?

A. Long appointments markedly improve lung capacity

B. Respiratory effort and anxiety may worsen with prolonged treatment

C. Short visits worsen dyspnea because repeated transfers increase effort

D. Fatigue has no relationship to treatment tolerance

278. Case 8: Which historical factor remains important even though the patient stopped smoking?

A. Former smoking becomes clinically irrelevant immediately

B. Past tobacco use eliminates the need for screening

C. Past tobacco exposure remains a cancer and periodontal risk

D. Smoking history affects tooth color

279. Case 8: Which finding during oral cancer screening warrants referral?

A. Stable bilateral linea alba

B. Normal Fordyce granules

C. Long-standing asymptomatic torus

D. Persistent unexplained red-white lesion

280. Case 8: Which maintenance approach is most appropriate?

A. Use a standard respiratory protocol once COPD is medically stable

B. Keep the same semi-supine position at every maintenance visit

C. Focus on respiratory precautions and defer periodontal prevention

D. Respiratory-aware individualized periodontal care

281. Case 9 (Questions 281-290): A 67-year-old with osteoporosis has taken oral alendronate for five years. She has no cancer history and no prior jaw osteonecrosis. Examination shows moderate plaque, localized 5-mm periodontal pockets, and a fractured nonrestorable mandibular premolar that is asymptomatic. Why is the alendronate history important?

A. Antiresorptive-associated MRONJ risk

B. Five years of oral alendronate makes post-extraction MRONJ likely

C. Antiresorptive therapy directly reduces periodontal inflammation

D. It functions as an anticoagulant

282. Case 9: Which action regarding alendronate is appropriate for the dental hygienist?

A. Tell the patient to stop it immediately before cleaning

B. Double the dose before extraction

C. Oral antiresorptive therapy does not affect dental risk assessment

D. Do not stop alendronate without prescriber coordination

283. Case 9: Which treatment is appropriate for the periodontal pockets?

A. Avoid debridement because it is noninvasive

B. Use systemic antibiotics alone

C. Extract teeth with persistent 5-mm pockets to prevent future MRONJ

D. Nonsurgical periodontal therapy and careful reevaluation

284. Case 9: What is the best management of the nonrestorable premolar?

A. Leave it indefinitely because extraction is generally forbidden

B. Dental or surgical referral for risk-benefit planning

C. Extract it without reviewing medical history

D. Stop osteoporosis therapy before arranging an extraction referral

285. Case 9: Which local factor may increase risk of jaw complications?

A. Effective plaque control

B. Stable periodontal maintenance

C. Untreated oral infection

D. Healthy intact mucosa

286. Case 9: Which symptom should the patient report promptly?

A. Exposed jaw bone or a nonhealing extraction site

B. Temporary mint taste after toothpaste

C. Stable enamel craze line

D. Normal mild sensitivity to cold air

287. Case 9: Which preventive strategy is most appropriate long term?

A. Delay routine dental visits to avoid provoking jaw complications

B. Use sugar frequently to stimulate saliva

C. Plaque control and regular dental prevention

D. Wait for pain before seeking care

288. Case 9: Which statement about MRONJ risk is most accurate for this patient profile?

A. Risk is zero with oral bisphosphonates

B. Lower MRONJ risk than high-dose oncology regimens

C. MRONJ risk is determined mainly by treatment duration rather than dose

D. MRONJ risk becomes high after five years of any oral bisphosphonate

289. What details about the antiresorptive therapy and planned referral belong in the clinical record?

A. Record that the patient has osteoporosis

B. Omit medication duration

C. Drug details, oral findings, and referral plan

D. Document MRONJ as present without evidence

290. Case 9: Which reevaluation finding after periodontal therapy is favorable?

A. New suppuration

B. Increasing attachment loss

C. Progressive tooth mobility

D. Less bleeding and inflammation

291. Case 10 (Questions 291-300): A 72-year-old with nonvalvular atrial fibrillation takes apixaban twice daily. He has generalized gingivitis and moderate calculus but no history of excessive dental bleeding. He is scheduled for routine nonsurgical periodontal instrumentation. Which medication class does apixaban belong to?

A. Direct oral factor Xa inhibitor

B. Vitamin K antagonist

C. P2Y12 antiplatelet inhibitor

D. Thrombolytic enzyme

292. Case 10: Which action is inappropriate for the dental hygienist?

A. Review the bleeding history

B. Use local hemostatic measures if needed

C. Document the medication and indication

D. Unilateral apixaban discontinuation

293. Case 10: Which information is most important when assessing bleeding risk?

A. Tooth shade

B. Preferred appointment music

C. Bleeding and procedure risk

D. Dominant hand

294. Case 10: Which local measure can help manage minor bleeding after instrumentation?

A. Routine systemic vitamin K for apixaban

B. Hold the next apixaban dose if post-treatment oozing continues

C. Firm gauze pressure at the bleeding site

D. Use of an acidic beverage

295. Case 10: Which additional medication history would increase concern for bleeding?

A. Topical fluoride varnish

B. Concurrent antiplatelet drug

C. Artificial tears

D. Saliva substitute

296. Case 10: Which clinical finding after treatment requires escalation rather than routine observation?

A. Mild transient gingival oozing that stops with pressure

B. Reduced bleeding on probing at recall

C. Stable vital signs

D. Bleeding unresponsive to local measures

297. Case 10: Which periodontal intervention is still important despite anticoagulant therapy?

A. Limit instrumentation depth to reduce anticoagulant-related bleeding

B. Plaque and calculus control to reduce inflammation

C. Allow calculus to remain to prevent bleeding

D. Use antibiotics instead of debridement

298. Case 10: Does the INR routinely measure the anticoagulant effect of apixaban?

A. Yes, INR can be used to titrate the anticoagulant effect of apixaban

B. No; INR is mainly used to monitor warfarin therapy

C. Yes, INR directly measures platelet function

D. No, because apixaban acts on platelets rather than coagulation factors

299. Case 10: Which appointment planning principle is appropriate?

A. Atraumatic care with time for hemostasis

B. Schedule immediately before a long unattended trip

C. Avoid checking bleeding before dismissal

D. Use more tissue trauma to speed treatment

300. Case 10: Which follow-up instruction is appropriate?

A. Advise the patient to skip future doses independently

B. Tell the patient that bleeding cannot occur after discharge

C. Recommend vigorous rinsing if a clot forms

D. Local-pressure instructions and a contact plan

301. Case 11 (Questions 301-310): A 23-year-old college student has a history of self-induced vomiting related to an eating disorder and is receiving medical and behavioral-health treatment. Oral findings include smooth cupped erosion on palatal maxillary surfaces, enlarged parotid glands, dry mouth, and dentin sensitivity. The patient asks how to reduce further damage. Which process most directly caused the palatal erosion?

A. Subgingival calculus mineralization

B. Fluoride incorporation into enamel

C. Mechanical wear from floss

D. Repeated exposure to gastric acid

302. Case 11: What should the patient do immediately after vomiting?

A. Neutralizing rinse, then delayed brushing

B. Brush hard with an abrasive paste at once

C. Rinse with a sugary acidic beverage

D. Hold gastric contents against the teeth

303. Case 11: Why can dentin sensitivity develop?

A. Exposed dentinal tubules from erosion

B. Acid creates new enamel over the roots

C. Salivary proteins rapidly seal exposed dentinal tubules after erosion

D. Sensitivity proves pulpal necrosis

304. Case 11: Which professional preventive measure is appropriate?

A. Repeated acid etching of exposed dentin

B. Topical fluoride and desensitizing therapy as part of comprehensive care

C. Coarse polishing of eroded surfaces

D. No preventive care until the eating disorder is fully resolved

305. Case 11: How should the dental hygienist discuss the eating disorder?

A. Use shame to stop the behavior

B. Confront the patient publicly

C. Avoid any discussion of oral effects

D. Private, nonjudgmental, coordinated support

306. Case 11: Which salivary change can increase caries risk?

A. Reduced salivary flow and buffering capacity

B. Vomiting increases enamel mineralization after salivary buffering

C. Elimination of cariogenic bacteria

D. Permanent elevation of plaque pH

307. Case 11: Which dietary behavior should be discouraged for erosion control?

A. Frequent sipping of acidic beverages between meals

B. Drinking plain water

C. Eating balanced meals at regular times

D. Using sugar-free gum when appropriate

308. Case 11: Which finding is commonly associated with recurrent vomiting?

A. Extra permanent teeth

B. Parotid gland enlargement

C. Generalized enamel hyperplasia

D. Mandibular tori caused by acid

309. How should the clinician chart the erosion findings and sensitive eating-disorder history?

A. Use stigmatizing language in the record

B. Objective respectful charting of findings and history

C. Document an unconfirmed psychiatric diagnosis as fact

D. Omit erosion because the cause is sensitive

310. Case 11: Which overall treatment priority is most appropriate?

A. Attempt to treat the eating disorder primarily in the dental office

B. Restore eroded surfaces before addressing repeated acid exposure

C. Oral protection with multidisciplinary care

D. Avoid preventive visits until symptoms disappear

311. Case 12 (Questions 311-320): A 52-year-old with confirmed Sjogren syndrome reports severe dry mouth and dry eyes. Examination shows little pooled saliva, multiple cervical caries lesions,

erythematous candidal-appearing mucosa beneath a removable partial denture, and difficulty swallowing dry foods. Which pathophysiologic process best explains the xerostomia?

A. Multiple salivary duct obstructions caused by chronic inflammation

B. Loss of enamel from toothbrushing

C. Increased parasympathetic stimulation

D. Autoimmune dysfunction of salivary glands

312. Case 12: Which caries pattern is particularly common with severe salivary hypofunction?

A. occlusal caries on unerupted teeth

B. Low salivary flow suppresses plaque growth and therefore lowers caries

C. Caries limited to one traumatic tooth

D. Cervical and root-surface caries

313. Which caries-prevention measure deserves highest priority in this patient with severe salivary hypofunction?

A. Frequent sucrose candies

B. Intensive topical fluoride and plaque control

C. Alcohol mouthrinse several times daily

D. Reduce brushing frequency to limit trauma to dry oral tissues

314. Case 12: Which strategy may improve oral comfort if residual salivary function remains?

A. Sugar-free salivary stimulation

B. Acidic candies sweetened with sucrose

C. Deliberate dehydration

D. Alcohol-containing rinses

315. Case 12: Which condition is suggested by the erythematous mucosa beneath the partial denture?

A. Denture candidiasis

B. Hairy leukoplakia

C. Herpes zoster

D. Periapical abscess

316. How should the patient care for the removable partial denture and the mucosa it covers?

A. Wear the prosthesis continuously without removal

B. Remove and clean the prosthesis daily and clean the supporting mucosa

C. Clean metal components with undiluted bleach

D. Store the prosthesis dry in direct heat

317. Case 12: Which symptom can result directly from severe xerostomia?

A. Difficulty chewing and swallowing dry foods

B. Dryness prolongs flavor contact and therefore improves taste sensation

C. Permanent prevention of candidiasis

D. Increased lubrication of mucosa

318. Which eating and drinking pattern would best lower caries risk when salivary flow is severely reduced?

A. Fewer sugar exposures; water between meals

B. Use frequent sweetened drinks to relieve oral dryness during the day

C. Suck on sugar-containing hard candy frequently

D. Hold acidic drinks in the mouth before swallowing

319. Case 12: Which follow-up interval is most appropriate?

A. Several years between visits

B. Short caries and xerostomia reassessment interval

C. Extend the recall interval once prescription fluoride has been started

D. Recall after tooth pain develops

320. Which combination of changes would show that xerostomia-related disease is being controlled?

A. Fewer lesions, healthier mucosa, and better comfort

B. New cervical lesions accompanied by less dentin sensitivity

C. Increasing candidal erythema

D. Progressively lower salivary comfort

321. Case 13 (Questions 321-330): A 66-year-old is six months post ischemic stroke with residual right-sided weakness and mild dysphagia. He takes aspirin, a statin, and an antihypertensive. He can consent independently but needs extra time to transfer and has difficulty using floss with the affected hand. Which appointment modification best improves safety?

A. Safe transfers and aspiration-aware positioning

B. Rush transfers to keep the schedule

C. Use a steep head-down position despite dysphagia

D. Require the patient to stand during treatment

322. Case 13: Which oral hygiene aid may best compensate for unilateral hand weakness?

A. Tiny hard brush requiring maximal dexterity

B. Sharp curet for home use

C. Powered toothbrush with an adapted grip

D. Use a conventional manual brush with a narrow standard handle

323. Case 13: Which interdental option may be easier than string floss?

A. Hand scaler used without training

B. Use abrasive dental tape around exposed proximal root surfaces

C. Floss holder or interdental brush

D. Rely on toothbrushing rather than adding an interdental device

324. Case 13: Why is mild dysphagia important during ultrasonic or polishing procedures?

A. It may increase aspiration risk from water, debris, or pooled saliva

B. It prevents any sensation in the oral cavity

C. Dysphagia reduces gagging and makes water evacuation easier

D. It requires the patient to be fully supine

325. Case 13: Which medication increases bleeding tendency by inhibiting platelet aggregation?

A. Aspirin therapy

B. Statin

C. Antihypertensive alone

D. Topical fluoride

326. Case 13: Which action regarding aspirin is appropriate before routine dental hygiene care?

A. Tell the patient to stop it for several days independently

B. Double the dose before treatment

C. Aspirin has little platelet effect when used at preventive doses

D. Do not advise discontinuation without medical direction

327. Case 13: Which blood pressure finding would most strongly justify medical reassessment before elective care?

A. Markedly elevated repeated readings with symptoms

B. A stable reading within the patient's usual controlled range

C. A normal pulse with no symptoms

D. A previously documented history of hypertension alone

328. Case 13: Who should give consent for routine treatment?

A. A family member routinely because a stroke occurred

B. The physical therapist

C. The patient with intact capacity

D. The dental receptionist

329. Case 13: Which home-care strategy best supports independence?

A. Adaptive devices with optional caregiver help

B. Shift routine oral hygiene to the caregiver to reduce patient fatigue

C. Avoid teaching the patient because weakness is permanent

D. Use the affected hand exclusively

330. Case 13: Which outcome indicates successful maintenance?

A. Increasing plaque and recurrent respiratory complications

B. New uncontrolled bleeding at each visit

C. Stable periodontium and safe visits

D. Progressive attachment loss without reassessment

331. Case 14 (Questions 331-340): A 30-year-old adult with Down syndrome lives with family and communicates verbally. He can describe preferences and understands routine dental choices with simple explanations. He has generalized plaque, early periodontal attachment loss, macroglossia, and a history of recurrent respiratory infections. His sister helps with evening brushing at his request. Which consent approach is most appropriate?

A. Use the diagnosis as the main reason to seek surrogate consent

B. Ask the sister to consent without involving him

C. Proceed without explanation because care is routine

D. Patient consent after capacity assessment

332. Case 14: Which periodontal concern is especially important in many people with Down syndrome?

A. Complete resistance to periodontitis

B. Absence of gingival inflammation

C. Early periodontal destruction risk

D. predicted root caries without plaque

333. How should instructions be presented so this patient can participate meaningfully in the visit?

A. Speak to the caregiver

B. Use complex jargon to test understanding

C. Clear brief instructions with demonstration

D. Give multiple rapid instructions without pauses

334. Case 14: Which home-care strategy is appropriate?

A. Have the caregiver perform all brushing to maximize consistency

B. Patient participation with requested caregiver help

C. Use force if he refuses brushing

D. Stop brushing when gingiva bleeds

335. Case 14: Why is the respiratory infection history important during treatment?

A. It has no relevance to appointment planning

B. It guarantees antibiotic prophylaxis

C. Recurrent respiratory infections require general anesthesia for hygiene care

D. Active respiratory illness may justify deferral

336. Case 14: Which instrumentation approach is most appropriate if cooperation decreases during a long appointment?

A. Continue despite escalating distress

B. Restrain the patient without indication

C. Shorter segmented visits

D. Abandon periodontal care markedly

337. Case 14: Which plaque-control aid may be useful if manual brushing is inconsistent?

A. Hard brush with vigorous pressure

B. Household abrasive powder

C. Metal scaler for unsupervised use

D. Powered toothbrush with caregiver coaching

338. Case 14: Which finding should be monitored closely because periodontal disease may progress rapidly?

A. Stable tooth shade

B. Attachment loss and bleeding on probing

C. Physiologic tongue size alone

D. Presence of saliva in the floor of the mouth

339. Case 14: Which ethical principle supports involving the patient directly in choices about his care?

A. Paternalism without consent

B. Confidentiality

C. Justice

D. Respect for autonomy

340. Given existing attachment loss and higher periodontal susceptibility, how should supportive care be scheduled?

A. Annual polishing regardless of disease

B. Avoid repeated probing because cooperation may decline over time

C. Wait for pain before recall

D. Frequent risk-based periodontal maintenance

341. Case 15 (Questions 341-350): A 58-year-old has a single maxillary premolar implant restored three years ago. The implant is stable and painless. There is plaque around the crown, bleeding on gentle probing, a 4-mm probing depth, and no progressive radiographic bone loss beyond initial remodeling. The patient rarely cleans interproximally. Which diagnosis best fits the peri-implant findings?

A. Peri-implantitis

B. Peri-implant mucositis

C. Loss of osseointegration

D. Acute apical abscess

342. Case 15: Which feature most clearly argues against peri-implantitis?

A. Presence of plaque

B. Bleeding on probing

C. No progressive bone loss

D. Need for interproximal cleaning

343. Case 15: What is the primary etiologic factor in this case?

A. Implant mobility

B. Pulpal necrosis of the implant

C. Physiologic tooth eruption

D. Peri-implant plaque biofilm

344. Case 15: Which professional intervention is most appropriate?

A. Aggressive scratching with coarse steel instruments

B. Implant-compatible biofilm debridement

C. Limit care to self-care instruction while the implant remains stable

D. Immediate implant removal

345. Case 15: Which home-care aid is especially useful around the implant crown if the embrasure permits?

A. Sharp metal curet used at home

B. Coarse abrasive strip beneath the crown

C. No interdental cleaning

D. Implant-safe interdental brush or floss

346. Case 15: Why is gentle standardized probing useful around implants?

A. It guarantees the implant will fail

B. Monitor peri-implant inflammation and tissue levels

C. It should rarely be performed around any implant

D. It measures pulpal vitality of the implant

347. Case 15: Which peri-implant finding at reevaluation best indicates clinical improvement?

A. New radiographic bone loss

B. Increasing suppuration

C. Development of implant mobility

D. Less bleeding with better plaque control

348. Case 15: Which radiographic approach is most useful for monitoring supporting bone?

A. Compare standardized current and baseline images

B. Obtain routine annual implant radiographs regardless of clinical change

C. Rely on a single current image with no baseline

D. Use radiographs to measure gingival redness

349. Case 15: Which risk factor is most clearly modifiable in this patient?

A. Implant placement three years ago

B. Patient age of 58 years by itself

C. The fact that the restoration is a premolar

D. Inadequate plaque control around the implant

350. Case 15: Which long-term maintenance principle is most appropriate?

A. Use a fixed six-month interval for all implant patients

B. Stop peri-implant probing after inflammation has resolved

C. Risk-based implant maintenance interval

D. Use symptom-triggered follow-up rather than scheduled implant maintenance

Answers

1. C. The facial artery crosses the inferior border of the mandible immediately anterior to the masseter, where it is relatively superficial. This landmark makes the vessel vulnerable to injury in that region.

2. C. The maxillary sinus often extends near the roots of premolars and molars. Its floor can project over root apices on dental radiographs and may mimic or obscure periapical findings.

3. B. The greater palatine nerve supplies the posterior hard palate and palatal gingiva. The nasopalatine nerve supplies the anterior palate, while the other nerves do not provide palatal sensory innervation.

4. B. The lingual nerve carries general somatic sensation from the anterior two thirds of the tongue. Chorda tympani fibers travel with it for taste, but the lingual nerve is the principal nerve at risk near the lingual mandibular cortex.

5. C. The TMJ disc separates the joint into superior and inferior compartments. Translation occurs mainly in the superior compartment, whereas rotation predominates in the inferior compartment.

6. D. The hyoid is suspended by muscles and ligaments and does not form a direct bony articulation. The temporal and sphenoid bones articulate with multiple cranial bones, and the mandible articulates with the temporal bone.

7. B. The incisive canal terminates near the incisive papilla behind the maxillary central incisors. This area is the clinical landmark for nasopalatine anesthesia.

8. C. The Curve of Spee is the anteroposterior curvature of the occlusal plane. The Curve of Wilson describes the mediolateral curvature across posterior teeth.

9. C. The cusp or tubercle of Carabelli is a common accessory feature on the lingual aspect of the mesiolingual cusp of the maxillary first molar.

10. B. Mandibular first molars generally have two roots, one mesial and one distal. Maxillary molars typically have two buccal roots and one palatal root.

11. C. Ameloblasts differentiate from inner enamel epithelium and produce enamel matrix. They are lost after eruption, which explains why mature enamel cannot regenerate biologically.

12. B. Cementoblasts form cementum along the root surface. Fibroblasts maintain periodontal ligament fibers, osteoclasts resorb bone, and ameloblasts form enamel.

13. C. Type I collagen is the major fibrillar collagen in the periodontal ligament and provides tensile strength. Type III is also present but in a smaller proportion.

14. C. After root formation, fragments of Hertwig epithelial root sheath remain in the periodontal ligament as the epithelial rests of Malassez.

15. B. The most common CEJ relationship is cementum overlapping enamel. Edge-to-edge contact and a small gap exposing dentin also occur as normal variations.

16. B. Junctional epithelium has rapid turnover and relatively wide intercellular spaces, allowing defensive cells to migrate through it. It is nonkeratinized rather than heavily keratinized.

17. A. When primary odontoblasts are damaged, progenitor cells can differentiate into odontoblast-like cells that produce reparative tertiary dentin in response to injury.

18. C. Secondary dentin is deposited slowly after root formation is complete and continues throughout life, gradually reducing the size of the pulp chamber.

19. D. Hertwig epithelial root sheath shapes the developing root and induces adjacent dental papilla cells to differentiate into odontoblasts that form root dentin.

20. C. The lamina dura is the radiographic image of alveolar bone proper lining the socket. It appears as a thin radiopaque line around the root.

21. A. The submandibular glands provide most unstimulated salivary flow. Parotid contribution increases markedly during stimulation.

22. D. Salivary alpha-amylase hydrolyzes starch into smaller carbohydrate molecules. Protein and most fat digestion rely primarily on enzymes active later in the gastrointestinal tract.

23. B. Bicarbonate concentration rises with stimulated salivary flow and is a major mechanism for neutralizing plaque acids and helping restore oral pH.

24. C. Parathyroid hormone raises serum calcium through increased bone resorption, increased renal calcium reabsorption, and stimulation of active vitamin D formation.

25. C. Vitamin B12 deficiency impairs DNA synthesis and can produce megaloblastic anemia. Neurologic abnormalities may also occur when deficiency is prolonged.

26. A. Vitamin D promotes intestinal absorption of calcium and phosphate and supports normal mineralization of bone and teeth.

27. B. Ribosomes translate messenger RNA into polypeptide chains. The Golgi apparatus modifies proteins after synthesis, while lysosomes contain degradative enzymes.

28. C. Hemoglobin binds oxygen in the lungs and carries it within red blood cells to tissues. Its iron-containing heme groups permit reversible oxygen binding.

29. B. S. mutans uses sucrose to synthesize sticky glucans that enhance adherence and biofilm accumulation. Its acid production and acid tolerance further support cariogenicity.

30. D. Lactobacilli thrive in low-pH environments and are associated more with progression of established caries than with the earliest colonization of intact enamel.

31. B. A. actinomycetemcomitans is an important periodontal pathogen historically associated with rapid attachment loss in younger patients and selected aggressive disease patterns.

32. B. Motile spirochetes are more abundant in mature anaerobic subgingival biofilms associated with periodontal inflammation and tissue destruction.

33. D. Lipopolysaccharide is a component of the outer membrane of gram-negative bacteria and functions as endotoxin, stimulating host inflammatory responses.

34. A. Complement fragments can opsonize microorganisms, attract inflammatory cells, and participate in membrane attack. These actions support innate and antibody-mediated defense.

35. D. IgG is the predominant serum immunoglobulin and is central to secondary humoral immune responses. Secretory IgA is especially important at mucosal surfaces.

36. A. Biological indicators containing resistant bacterial spores provide the best routine evidence of sterilizer efficacy. Chemical indicators and mechanical readings are useful but do not replace spore testing.

37. C. Mucous membrane pemphigoid can produce desquamative gingivitis and relatively tense bullae because separation occurs below the epithelium. Diagnosis requires appropriate clinical and laboratory evaluation.

38. B. Pemphigus vulgaris produces intraepithelial separation, so bullae are fragile and a Nikolsky sign may be present. Oral lesions can precede skin disease.

39. B. Reactivation of varicella-zoster virus produces shingles, typically as painful unilateral vesicles in a dermatomal pattern that respects the midline.

40. A. A periodontal abscess often presents with localized swelling, deep probing, and a tooth that may remain vital. Endodontic lesions are more closely associated with pulpal necrosis.

41. A. Periapical cemento-osseous dysplasia commonly occurs near vital mandibular anterior teeth and matures from radiolucent to mixed and radiopaque stages. Vitality testing helps avoid unnecessary endodontic treatment.

42. C. A dentigerous cyst surrounds the crown of an unerupted tooth and attaches near the CEJ. It is one of the most common developmental odontogenic cysts.

43. C. Ameloblastoma is a benign but locally aggressive odontogenic tumor, commonly affecting the posterior mandible and sometimes producing a multilocular radiographic appearance.

44. A. Sjogren syndrome is an autoimmune exocrinopathy causing xerostomia and keratoconjunctivitis sicca. Reduced salivary flow increases caries and candidiasis risk.

45. A. Hyperglycemia is associated with dysregulated inflammatory responses, impaired host defense, and delayed wound healing, which can worsen periodontal disease susceptibility and outcomes.

46. D. Iron deficiency may cause atrophic glossitis, producing a smooth or burning tongue due to loss or thinning of filiform papillae.

47. C. Angular cheilitis is often associated with saliva pooling and secondary Candida or bacterial infection, especially when reduced vertical dimension or lip commissure folds are present.

48. D. ACE inhibitors can cause a persistent nonproductive cough related to bradykinin accumulation. This adverse effect can affect tolerance and medical management.

49. D. Some calcium channel blockers, particularly agents such as nifedipine, can contribute to gingival enlargement. Local plaque-related inflammation can magnify the enlargement.

50. C. Nonselective beta blockers block beta-2 receptors in bronchial smooth muscle and can worsen bronchospasm in susceptible patients. Medication history should therefore be reviewed carefully.

51. B. Warfarin inhibits vitamin K recycling and reduces synthesis of several vitamin K-dependent clotting factors. Its effect is commonly monitored with the INR.

52. B. The INR standardizes prothrombin time and is used to monitor warfarin anticoagulation. Direct oral anticoagulants are not routinely monitored with INR.

53. C. Aspirin irreversibly inhibits platelet cyclooxygenase-1, decreasing thromboxane A2 formation and platelet aggregation for the life of the platelet.

54. D. Clopidogrel inhibits the platelet P2Y12 ADP receptor, reducing activation and aggregation. It is an antiplatelet drug rather than an anticoagulant.

55. B. Nitroglycerin causes vascular smooth muscle relaxation, especially venodilation, which reduces preload and myocardial oxygen demand and can relieve anginal pain.

56. B. Benzodiazepines enhance GABA-A receptor activity, increasing inhibitory neurotransmission. Sedation and respiratory depression can be amplified when combined with other central nervous system depressants.

57. C. Opioids can depress respiratory drive, and this effect may be additive with benzodiazepines, alcohol, and other sedatives. Combining central nervous system depressants requires caution.

58. A. Early local anesthetic systemic toxicity may produce circumoral numbness, metallic taste, tinnitus, dizziness, or agitation before more severe central nervous system and cardiovascular effects develop.

59. C. Apixaban is a direct oral anticoagulant that inhibits factor Xa. Warfarin reduces vitamin K-dependent factor synthesis, while aspirin and clopidogrel are antiplatelet agents.

60. B. Nystatin is a topical polyene antifungal commonly used for oral candidiasis. Acyclovir is antiviral, while amoxicillin and doxycycline are antibacterial agents.

61. B. Acyclovir and related nucleoside analogues inhibit herpesvirus DNA replication and are used for herpes simplex and varicella-zoster infections.

62. D. Orthostatic hypotension is evaluated by comparing blood pressure and pulse after moving from supine or seated to standing positions. A significant pressure drop with symptoms supports the diagnosis.

63. C. When recession is present, clinical attachment level equals probing depth plus the distance from the CEJ to the gingival margin. Here, 4 mm plus 3 mm equals 7 mm.

64. D. When the gingival margin is coronal to the CEJ, the amount of gingival enlargement is subtracted from probing depth. Six millimeters minus two millimeters equals 4 mm of attachment loss.

65. B. Bleeding on probing reflects ulceration and inflammation of the sulcular or pocket epithelium. It is not a direct measure of future progression but is clinically useful for identifying current inflammation.

66. B. A very deep isolated pocket may indicate a localized structural or endodontic-periodontal problem such as a vertical root fracture. The finding should not automatically be assumed to represent generalized periodontitis.

67. C. A Nabers probe has a curved working end that facilitates entry into furcation areas. Standard periodontal probes can estimate pocket depth but are less suited for horizontal furcation assessment.

68. C. Class II mobility generally denotes horizontal movement greater than 1 mm. Class III includes severe horizontal movement with vertical depressibility.

69. B. A persistent firm fixed lymph node can indicate significant infection or malignancy and warrants timely evaluation. Normal anatomic contours and transient trauma are less concerning.

70. D. New spontaneous bleeding requires assessment for medications, systemic disease, or hematologic abnormalities that can alter hemostasis. The other details do not address the immediate risk.

71. A. Objective signs of salivary hypofunction include scant pooled saliva, sticky mucosa, stringy saliva, and increased caries or candidiasis. Subjective dryness can occur even when flow is normal.

72. D. Matching wear facets on opposing teeth support parafunctional tooth-to-tooth contact. Bruxism may also be associated with muscle tenderness or fractured restorations.

73. A. Precise descriptive documentation allows meaningful comparison over time and supports referral. Vague impressions do not provide an adequate clinical record.

74. D. Clinical attachment loss is measured from the CEJ to the base of the pocket. With recession, the recession amount is added to probing depth: 4 mm + 5 mm = 9 mm.

75. B. Acute inflammatory changes commonly include redness, edema, tenderness, and easy bleeding. Chronic fibrotic tissue may appear firmer and less edematous.

76. D. Asymptomatic joint sounds are common. The hygienist should document the finding, assess range of motion and symptoms, and refer if pain, locking, trauma, or functional limitation is present.

77. B. Periodontal risk is dynamic. New tobacco exposure and worsening inflammation can materially change disease risk and maintenance needs.

78. C. Gingivitis presents with inflammation without loss of periodontal attachment or alveolar bone. Deep pockets and attachment loss are required to diagnose periodontitis.

79. B. The CEJ is a stable reference point. Recession places the gingival margin apical to the CEJ, while enlargement can position it coronal to the CEJ.

80. A. Fremitus and mobility can indicate excessive functional forces. These findings should be interpreted together with occlusion and periodontal support rather than in isolation.

81. B. Radiation field and dose influence risks such as xerostomia, trismus, and osteoradionecrosis. Current cancer status and ongoing therapies also affect dental hygiene planning.

82. B. Horizontal bitewings display crowns and crestal bone of maxillary and mandibular posterior teeth with minimal superimposition when technique is correct.

83. A. Vertical bitewings provide increased apico-coronal coverage and can better display crestal bone in patients with significant periodontal bone loss.

84. D. Excessive vertical angulation produces foreshortening in the bisecting technique. Insufficient vertical angulation more often produces elongation.

85. C. Overlapped contacts result from incorrect horizontal beam angulation. The central ray should be directed through the interproximal spaces of the teeth being imaged.

86. D. Digital receptors can be overexposed even if software compensates visually. Exposure settings should be optimized to obtain diagnostic information with the lowest reasonable dose.

87. C. Rectangular collimation limits the x-ray beam to the size of the receptor and substantially reduces exposed tissue compared with round collimation.

88. D. Cone cutting results when part of the receptor lies outside the useful x-ray beam because the position-indicating device is misaligned.

89. A. In horizontal bone loss, the alveolar crest remains relatively parallel to the CEJ line but is located farther apically than normal.

90. A. Cervical burnout is an optical/radiographic phenomenon with diffuse borders near the CEJ. Clinical examination is essential to distinguish it from true root caries.

91. C. When the tongue is not held against the palate, air between the tongue and palate appears as a dark band that can obscure maxillary apices on panoramic images.

92. D. Positioning too far back generally makes anterior teeth appear widened and blurred. Positioning too far forward tends to narrow them.

93. A. Radiographs should be selected according to individual clinical findings, disease risk, prior images, and anticipated diagnostic value rather than a fixed universal schedule.

94. B. Moderate or heavy interproximal calculus can appear as radiopaque spurs or nodules on root surfaces, although radiographs do not reveal all deposits.

95. C. The receptor must extend sufficiently beyond the apex to capture the periapical region. Improper placement can cut off the apex even if exposure factors are adequate.

96. D. Unnecessary retakes increase cumulative radiation dose. A retake is justified only when the original image does not answer the clinical question adequately.

97. D. The dental hygiene process of care begins with assessment, followed by diagnosis, planning, implementation, and evaluation. Each phase informs the next and supports individualized care.

98. C. Nonsurgical therapy aims to disrupt biofilm, remove calculus and other retentive deposits, and establish conditions that support healing and patient plaque control without unnecessary root removal.

99. C. Gracey curets are area-specific with a rounded toe and offset blade, making them well suited for subgingival posterior proximal root adaptation.

100. D. Effective curet adaptation keeps the lower third of the cutting edge against the tooth. This reduces tissue trauma and improves control on curved root surfaces.

101. A. A working angulation near 70 to 80 degrees allows the cutting edge to engage calculus. A closed angle is used during insertion rather than active removal.

102. D. Calculus removal requires controlled activation with sufficient lateral pressure and short pull strokes. Detection strokes use lighter pressure.

103. B. Explorers detect changes in root surface texture. Calculus produces a rough, raised, or irregular sensation compared with a clean root surface.

104. B. A modified pen grasp supports fine control and tactile sensitivity while permitting stable activation. It works together with an appropriate fulcrum rather than replacing one.

105. C. A secure fulcrum stabilizes the clinician's hand, improves precision, and reduces the chance of slipping into soft tissue.

106. A. Sickle scalers have pointed tips and triangular cross-sections and are best suited for supragingival calculus and limited shallow subgingival use.

107. A. Universal curets have two usable cutting edges on each working end and a face perpendicular to the lower shank, permitting use throughout the dentition.

108. D. The lateral surface of an ultrasonic tip should remain adapted with light pressure and constant motion. Pointing the tip directly at the root increases risk of tissue and root damage.

109. A. Water cools the vibrating tip and provides lavage. Ultrasonic devices still generate aerosols and require appropriate infection-control measures.

110. D. Electromagnetic compatibility varies by device and equipment. Current device-specific information and manufacturer recommendations should guide instrument selection.

111. A. Improvement is reflected by reduced inflammation, less bleeding, better plaque control, and often shallower probing depths. Persistent or worsening findings require reassessment.

112. D. Reevaluation should allow time for soft-tissue healing and behavior change while being timely enough to modify the care plan based on response.

113. C. Maintenance frequency should be individualized according to disease history, residual inflammation, pocketing, systemic and behavioral risks, and self-care effectiveness.

114. D. Supportive periodontal care aims to maintain treatment gains through periodic reassessment, professional biofilm disruption, reinforcement of self-care, and timely management of recurrent disease.

115. A. Root exposure and removal of surface deposits can open dentinal tubules. Hydrodynamic movement within these tubules can trigger short sharp sensitivity.

116. D. Professional desensitizing therapies can occlude dentinal tubules or reduce nerve excitability. Fluoride varnish is one commonly used approach depending on the clinical situation.

117. C. Selective polishing limits unnecessary removal of tooth structure and restorative material. It should be used for specific indications such as extrinsic stain removal.

118. A. Exposed roots are more susceptible to abrasion than enamel. The least abrasive effective agent and light controlled pressure reduce unnecessary surface loss.

119. D. Air polishing can be effective, but powder type, pressure, and surface compatibility matter. Some abrasives can damage exposed dentin or restorative materials.

120. D. Implant maintenance requires effective biofilm disruption while minimizing surface alteration. Instrument selection depends on implant design and current evidence or manufacturer guidance.

121. B. Peri-implant mucositis is inflammation confined to soft tissues without progressive bone loss beyond initial remodeling. Peri-implantitis includes inflammatory bone loss.

122. C. Initial management of necrotizing periodontal disease focuses on gentle local debridement, antimicrobial measures when indicated, pain control, and correction of contributing factors such as smoking, stress, or immune compromise.

123. C. A periodontal abscess is an acute localized accumulation of pus within periodontal tissues and often presents with swelling, tenderness, suppuration, and a deep pocket.

124. D. Tactile evaluation identifies residual calculus or surface irregularities that may require additional instrumentation while avoiding unnecessary removal of sound root structure.

125. D. Neutral posture, appropriate patient positioning, magnification when appropriate, and microbreaks reduce cumulative strain. Prolonged flexion and twisting increase musculoskeletal risk.

126. B. Indirect vision, effective retraction, and patient/light repositioning improve access while helping maintain neutral operator posture.

127. C. Topical fluoride promotes remineralization, reduces demineralization, and can inhibit bacterial metabolism. Frequent low-level exposure is important after eruption.

128. B. High-risk patients with xerostomia or recurrent caries may benefit from higher-concentration fluoride products under professional direction as part of a comprehensive prevention plan.

129. B. Sealants isolate vulnerable pits and fissures from cariogenic biofilm and fermentable carbohydrates, reducing caries risk when placed and maintained appropriately.

130. D. Sealants are most useful for susceptible pits and fissures that are sound or have noncavitated early lesions. Cavitated lesions require restorative evaluation.

131. B. Caries risk rises with frequent fermentable carbohydrate exposures because each exposure can lower plaque pH and extend the time available for demineralization.

132. A. Xylitol is not readily fermented by major cariogenic bacteria and is commonly used in sugar-free gum. It is one adjunct, not a substitute for fluoride and plaque control.

133. A. Interdental or orthodontic brushes can access around brackets and beneath arch wires more effectively than a standard brush alone when used correctly.

134. D. The Bass method uses bristles directed approximately 45 degrees toward the sulcus with small vibratory motions. Technique should be individualized to dexterity and tissue condition.

135. C. Reducing brushing force and using soft bristles can limit further abrasion while maintaining plaque control. Technique should still effectively clean the gingival margin and interproximal areas.

136. B. Interdental brushes can be especially effective in larger embrasures and around exposed roots. The size should fit the space without injuring tissue.

137. C. Removable prostheses should be removed and cleaned regularly, and supporting tissues should be examined. Cleaning methods must be compatible with the prosthesis materials.

138. A. Periodic removal reduces prolonged mucosal coverage and facilitates hygiene. It does not guarantee prevention of infection and does not replace professional follow-up.

139. D. Motivational interviewing is collaborative and patient centered. Open questions, reflective listening, and eliciting change talk help patients identify their own reasons and confidence for change.

140. C. Small specific patient-selected goals are more actionable than broad instructions. Identifying cues and barriers supports self-efficacy and sustainable behavior change.

141. A. Dry-mouth management aims to improve comfort and protect against caries through hydration, saliva stimulation or substitutes when appropriate, and enhanced fluoride and dietary strategies.

142. A. Sugar-free gum can stimulate salivary flow without adding a fermentable sugar challenge. Products containing xylitol may provide an additional noncariogenic option.

143. B. Exposed root dentin is more vulnerable to demineralization than enamel. Consistent fluoride exposure and plaque control are central to root-caries prevention.

144. A. Erosive risk increases with repeated acid exposure and prolonged contact time. Reducing frequency and choosing less acidic alternatives such as water lowers the challenge.

145. B. Acid can transiently soften the mineralized surface. Allowing saliva to buffer and remineralize before vigorous brushing may reduce abrasion of softened enamel.

146. B. Noncavitated lesions can often be arrested or remineralized by controlling biofilm and diet and increasing fluoride exposure, with monitoring based on caries risk.

147. D. Vasovagal syncope commonly presents with pallor, sweating, nausea, bradycardia or hypotension, and transient loss of consciousness, often triggered by anxiety or pain.

148. C. Supine positioning with leg elevation improves venous return and cerebral perfusion. Airway, breathing, and circulation should also be assessed and monitored.

149. C. These symptoms suggest hypoglycemia. A conscious patient who can swallow should receive a fast-acting carbohydrate, followed by reassessment and additional food as appropriate.

150. A. A short-acting beta-2 agonist such as albuterol is the standard rescue medication for acute bronchospasm in asthma. Severe or unresponsive symptoms require emergency activation.

151. B. Anaphylaxis is life threatening and intramuscular epinephrine is the first-line medication. Emergency medical services should be activated, with airway and circulation support as needed.

152. C. Persistent or severe chest pain may represent acute coronary syndrome. Emergency services should be activated promptly while the patient is monitored and appropriate emergency measures are initiated.

153. C. Sudden focal neurologic deficits such as facial droop, unilateral weakness, and speech difficulty are classic stroke warning signs. Rapid emergency evaluation is time critical.

154. B. During a seizure, remove nearby hazards, protect the head, maintain airway safety, and do not force objects into the mouth or restrain convulsive movements.

155. B. Adrenal crisis can present with severe weakness, hypotension, gastrointestinal symptoms, and altered mental status. It is a medical emergency requiring rapid activation and supportive care.

156. C. Maintaining the patient's normal meal and medication schedule reduces hypoglycemia risk. The clinician should confirm food intake, medication use, and current glycemic status when relevant.

157. C. Anticoagulants should not be stopped unilaterally. Dental care planning should consider the procedure, bleeding risk, medication type, and communication with the prescribing clinician when needed.

158. B. The vascular access arm should be protected from pressure and puncture to reduce risk of thrombosis, bleeding, and access damage.

159. A. Treatment on a nondialysis day may avoid peak anticoagulant effects from heparin used during dialysis and may be better tolerated. Individual medical status still guides scheduling.

160. A. Some patients with COPD breathe more comfortably when upright or semi-supine. Positioning should be individualized to respiratory status and tolerance.

161. C. Unstable or recently changing cardiac symptoms raise the risk of an acute event. Elective dental hygiene treatment should be postponed pending appropriate medical evaluation.

162. C. Standard Precautions apply to all patients and are based on anticipated exposure rather than known infection status. They include hand hygiene, PPE, sharps safety, and other controls.

163. A. Hand hygiene is required at key moments including before donning gloves, after glove removal, and when contamination is possible. Gloves do not replace hand hygiene.

164. B. Critical items enter sterile tissue or the vascular system and require heat sterilization when reusable. Semicritical and noncritical items have different processing requirements.

165. D. Semicritical items contact mucous membranes or nonintact skin and should be heat sterilized when heat tolerant.

166. B. Cleaning is necessary before sterilization because debris can interfere with processing. Automated cleaning methods can reduce sharps exposure compared with hand scrubbing.

167. B. Internal chemical indicators show exposure to one or more process parameters. They complement mechanical and biological monitoring but do not prove sterility by themselves.

168. D. Immediate wound cleansing, prompt reporting, source and exposed-person evaluation, and timely postexposure management are essential. Delays can reduce the effectiveness of interventions.

169. B. Safety-engineered devices and safe work practices reduce exposure risk. Two-handed recapping, bending needles, and hand-to-hand passing increase risk.

170. A. If recapping is unavoidable, a one-handed scoop or mechanical device reduces the chance of puncturing the opposite hand.

171. D. Autonomy recognizes the competent patient's right to make informed choices, including refusal. The clinician should document the discussion and determine whether safe care can proceed.

172. D. Veracity requires truthful communication. Informed consent depends on accurate disclosure of material information rather than manipulation or omission.

173. B. Valid informed consent requires decision-making capacity, adequate disclosure, comprehension, voluntariness, and agreement. A signature alone does not establish informed consent.

174. C. Patient information should be limited to legitimate clinical or legal purposes and communicated through appropriate secure channels. Public or unnecessary disclosure violates confidentiality.

175. C. Clinical records should be corrected in a transparent manner that preserves the integrity of the original entry and identifies the correction according to legal and office requirements.

176. A. A patient waiver does not expand professional scope. Clinicians must practice within applicable law, supervision requirements, training, and professional standards.

177. A. Incidence measures new cases arising over time among people at risk. Prevalence measures all existing cases at a point or over a period.

178. D. Prevalence is the proportion of a population with a condition at a given time or during a defined period. It reflects both new and previously existing cases.

179. B. A confounder is related to the exposure and outcome and can create or obscure an association if not controlled through design or analysis.

180. A. Case-control studies select participants based on outcome status and compare prior exposures. They are particularly useful for relatively rare diseases.

181. A. Cohort studies classify participants by exposure and observe outcomes over time. They can directly estimate incidence and relative risk when appropriately designed.

182. B. Random allocation is the defining feature of a randomized controlled trial and helps balance known and unknown confounders between intervention groups.

183. A. A p value describes compatibility of the observed data with the null model. It does not directly give the probability that a hypothesis is true or the magnitude of an effect.

184. C. For a two-sided comparison, a 95% confidence interval excluding zero corresponds to statistical significance at approximately the 0.05 level. Clinical importance and bias require separate judgment.

185. A. The median is the middle observation after data are ordered and is relatively resistant to extreme outliers compared with the arithmetic mean.

186. C. Variance quantifies dispersion around the mean using squared deviations. Standard deviation is the square root of variance and is expressed in the original measurement units.

187. B. Sensitivity is the proportion of truly diseased individuals who test positive. High sensitivity reduces false-negative results and is useful when missing disease is costly.

188. B. Specificity is the proportion of nondiseased individuals who test negative. High specificity reduces false-positive results.

189. A. Predictive values depend on disease prevalence in the tested population. When prevalence rises, positive predictive value generally increases, assuming test characteristics remain stable.

190. D. Probability sampling uses a defined selection mechanism so members have a known chance of inclusion, improving the ability to generalize when other conditions are met.

191. D. Convenience samples are chosen based on accessibility and can introduce selection bias because they may not represent the target population well.

192. C. A needs assessment establishes the population's oral-health problems, determinants, resources, and priorities so interventions can be matched to actual needs.

193. B. A strong objective is specific, measurable, achievable, relevant, and time bound. The stated objective includes a target behavior, proportion, population, and deadline.

194. B. Process evaluation assesses implementation, reach, fidelity, and delivery. Outcome evaluation focuses on whether health or behavior objectives were achieved.

195. C. Outcome evaluation measures whether desired health or behavior changes occurred, such as increased sealant coverage or reduced caries incidence.

196. D. DMFT counts decayed, missing due to caries, and filled permanent teeth and is widely used to describe caries experience at the population level.

197. B. Primary prevention aims to prevent disease before it develops. Optimally fluoridated water reduces caries risk across a population before lesions occur.

198. A. Secondary prevention focuses on early detection and prompt intervention. Screening aims to identify disease before it becomes clinically advanced.

199. C. Human-subject research requires respect for persons, informed consent when applicable, risk minimization, confidentiality, and independent ethical oversight.

200. A. A rigorous systematic review can synthesize multiple relevant studies using explicit methods. Its usefulness still depends on the quality, applicability, and consistency of the included evidence.

201. A. Pregnancy can exaggerate the gingival inflammatory response to plaque. Because there is inflammation without attachment loss, plaque-induced gingivitis is more consistent than periodontitis.

202. C. Pregnancy-related hormonal changes can alter vascular and inflammatory responses, making plaque-associated gingivitis more pronounced. Plaque remains the local etiologic factor.

203. A. A semi-supine or left-tilted position can reduce compression of major abdominal vessels and improve comfort if supine hypotensive symptoms occur.

204. B. Plaque control should continue during pregnancy, but timing and technique can be adapted to nausea. A small soft brush and a better-tolerated time can improve adherence.

205. A. Gastric acid commonly affects palatal surfaces of maxillary teeth. The pattern is compatible with repeated emesis or reflux rather than plaque or floss trauma.

206. A. After acid exposure, rinsing helps clear and neutralize acid. Delaying aggressive brushing allows saliva time to buffer and reharden the softened surface.

207. D. Glucose dysregulation can influence host response and periodontal inflammation. Dental hygiene care remains appropriate, with attention to glycemic status and medical follow-up.

208. C. Reducing frequent sugar exposure supports caries prevention and is compatible with structured nutritional management of gestational diabetes.

209. A. Severe hypertension with neurologic symptoms during pregnancy can signal a serious obstetric condition and requires urgent medical assessment.

210. A. Plaque-induced pregnancy gingivitis is managed with effective biofilm control, professional cleaning when indicated, and reinforcement of self-care rather than routine systemic antibiotics or surgery.

211. D. Chalky white spots near plaque-retentive brackets are typical noncavitated enamel demineralization. At this stage, disease control and remineralization are important goals.

212. B. Fixed appliances create plaque-retentive niches that require modified brushing and interdental cleaning. Inadequate plaque removal drives the marginal inflammation.

213. C. Water avoids repeated sugar and acid exposures. Frequency and prolonged contact with sports drinks increase both cariogenic and erosive challenge.

214. D. A small interdental or orthodontic brush can access beneath wires and around brackets. It should supplement, not replace, thorough toothbrushing.

215. B. Noncavitated lesions can often be arrested or remineralized with fluoride and control of the biofilm and dietary drivers.

216. B. Brushing should target plaque around bracket margins and the gingival line. Bleeding from gingivitis is a reason to improve gentle cleaning, not avoid the area.

217. A. Early lesions can arrest, remineralize, or progress. Serial clinical assessment and risk-based imaging help evaluate disease activity over time.

218. C. Adolescent behavior change is more likely when goals are collaborative, specific, and realistic within the patient's routine.

219. C. Cavitation represents structural breakdown and may require restorative management depending on extent and cleansability. Reduced inflammation and a smoother lesion suggest improvement.

220. D. High caries activity and fixed appliances justify closer follow-up so self-care, fluoride use, diet, and lesion status can be reassessed and reinforced.

221. C. Reduced saliva decreases buffering and clearance, while exposed root surfaces are less mineralized than enamel. Together they markedly increase root-caries susceptibility.

222. D. A powered brush and adapted handle can reduce the dexterity demands of brushing while maintaining effective plaque removal.

223. C. Interdental brushes are often easier to manipulate than floss in open embrasures and can be adapted with larger handles for limited dexterity.

224. D. High-fluoride preventive strategies can support remineralization and arrest of noncavitated root lesions when combined with plaque and diet control.

225. A. A neurologic diagnosis does not remove decision-making authority. A capable adult provides consent; family involvement should reflect the patient's preferences and needs.

226. A. Treatment may be easier during the patient's best “on” period, when tremor and rigidity are better controlled by medication.

227. D. Sugar-free salivary stimulants can improve comfort when residual gland function is present without adding a cariogenic sugar challenge.

228. A. Motor limitations can impair oral clearance and self-care, leading to retained food and plaque unless care is adapted.

229. C. Support persons can assist with oral hygiene when the patient agrees. Education should preserve patient autonomy and stay within appropriate clinical roles.

230. C. Arrested root caries becomes harder and inactive, while improved plaque control and stable lesion size support successful prevention.

231. B. An elevated HbA1c indicates chronic hyperglycemia, which can amplify periodontal inflammation and impair healing. Insulin therapy and eating before care are not adverse factors by themselves.

232. C. The presence of periodontal pockets with supporting bone and attachment loss establishes periodontitis rather than gingivitis alone.

233. B. Mismatch between insulin, food intake, and appointment demands can precipitate hypoglycemia. A normal meal and medication schedule generally improves safety.

234. C. Adrenergic and neuroglycopenic symptoms such as sweating, tremor, confusion, and hunger are typical of hypoglycemia and require prompt assessment and treatment.

235. C. A conscious patient with hypoglycemia should receive a rapid carbohydrate source, followed by reassessment and additional food as needed.

236. B. Local periodontal therapy is indicated, while poor glycemic control supports closer monitoring and coordination with the patient's medical team.

237. D. Daily plaque control reduces the inflammatory burden and is central to periodontal therapy. Bleeding areas generally require improved gentle cleaning rather than avoidance.

238. A. Reduced bleeding, edema, plaque, and pocket depth where reversible inflammation resolves are favorable signs after nonsurgical therapy.

239. D. The relationship is bidirectional at the level of inflammatory burden and disease control. This supports coordinated care without implying that periodontal therapy replaces diabetes treatment.

240. B. Residual periodontal risk and poor glycemic control support closer supportive care, with the interval adjusted as disease stability and self-care improve.

241. D. A persistent unexplained non-wipeable white lesion on a high-risk site warrants timely professional evaluation. Tobacco exposure further increases concern.

242. B. Combustible tobacco is a major established risk factor for oral squamous cell carcinoma. Vaping is not a safe alternative, but cigarette smoking has a well-established carcinogenic risk.

243. C. Smoking can reduce gingival blood flow and visible bleeding, potentially masking clinical inflammation even while periodontal destruction risk is increased.

244. D. Dental professionals can provide brief tobacco intervention by asking, advising, assessing readiness, assisting, and arranging follow-up or referral to evidence-based cessation resources.

245. D. Smoking is a major modifiable periodontal risk factor associated with disease progression and poorer treatment response.

246. A. Precise documentation supports comparison and continuity of care without making an unconfirmed diagnosis.

247. B. Vaping can maintain nicotine dependence and may expose oral tissues to irritants. It should be included in a comprehensive tobacco and nicotine history.

248. D. Periodontal care should address local biofilm and calculus while also targeting major modifiable risks such as smoking.

249. D. Induration, ulceration, unexplained bleeding, fixation, or regional lymphadenopathy are concerning features that strengthen the need for prompt evaluation.

250. C. A benign result does not remove the patient's ongoing tobacco-related risk. Regular examination and continued cessation support remain appropriate.

251. C. A nondialysis day can reduce concerns related to heparin used during dialysis and may improve patient comfort. Individual medical recommendations still take priority.

252. A. Pressure on a vascular access arm can damage the fistula or promote thrombosis. Blood pressure and venipuncture should be performed on the opposite arm when appropriate.

253. B. Anticoagulation with heparin is commonly used during hemodialysis and can transiently increase bleeding risk around the dialysis session.

254. C. Xerostomia can result from fluid restriction, medications, and systemic disease and can increase discomfort, plaque retention, and caries risk.

255. A. Many medications or metabolites are eliminated by the kidneys. Prescribers may need to adjust drug choice or dose according to renal function and dialysis status.

256. A. Stable dialysis patients can receive indicated nonsurgical periodontal care with appropriate medical precautions. Heavy deposits may require staged appointments.

257. B. Dry-mouth care emphasizes caries prevention and symptom relief while respecting any medical fluid restrictions or medication considerations.

258. A. New bleeding, hemodynamic instability, infection, or major dialysis changes may alter treatment safety and justify medical coordination.

259. C. Changes in salivary minerals and pH can promote calculus formation, although plaque biofilm remains the organic framework for mineralization.

260. B. Successful supportive care is reflected by control of inflammation, improved self-care, and stability of periodontal attachment rather than progressive disease.

261. B. Adaptive handles and powered devices can reduce the fine motor demands of daily plaque control in patients with arthritis.

262. A. The patient has gingival inflammation without attachment loss, which is consistent with gingivitis rather than periodontitis.

263. D. Methotrexate can cause marrow suppression, mucositis, or infection risk in susceptible patients. Stable therapy does not automatically preclude dental hygiene care.

264. A. Persistent ulceration, fever, or infection may indicate medication toxicity or immunosuppression and warrants timely assessment and possible medical coordination.

265. D. Chronic systemic corticosteroids can suppress the hypothalamic-pituitary-adrenal axis and affect immune response. Dose and duration help determine clinical relevance.

266. C. Supportive positioning and brief breaks can reduce joint discomfort and help the patient tolerate treatment without compromising care.

267. A. Plaque-induced gingivitis is managed by effective professional and home biofilm control. Rheumatoid arthritis does not eliminate the role of local plaque.

268. D. Alternative interdental aids can improve access and dexterity. The choice should fit embrasure size and restoration contours without trauma.

269. C. Improved local plaque control should reduce gingival inflammation even though the systemic autoimmune condition remains present.

270. B. Polypharmacy and systemic disease can alter medication safety. Drug recommendations should be based on a complete medication history and within professional scope.

271. B. Patients with COPD may breathe more comfortably in a semi-supine or upright position. Position should be individualized to symptoms and oxygenation.

272. C. A short-acting bronchodilator such as albuterol is used for acute bronchospasm and should be available for a patient who requires it as rescue therapy.

273. A. Anticholinergic medications can reduce salivary secretion and contribute to xerostomia, which may increase caries risk.

274. A. Dry mouth increases caries susceptibility, so fluoride, plaque control, diet management, and symptom relief become more important.

275. B. Acute bronchospasm requires cessation of treatment, positioning for ventilation, and use of the prescribed short-acting bronchodilator, with emergency activation if symptoms do not resolve.

276. C. Elective treatment should be postponed during acute respiratory deterioration because airway and oxygenation risks are higher.

277. B. Shorter, well-tolerated visits can reduce respiratory stress and allow more comfortable positioning and breaks.

278. C. Risk decreases after cessation, but cumulative tobacco exposure remains relevant to oral cancer, periodontal, and systemic health assessment.

279. D. Persistent unexplained ulceration or red-white change requires evaluation, especially in a patient with substantial tobacco exposure.

280. D. Supportive care should integrate periodontal needs with respiratory tolerance, medication effects, and emergency preparedness.

281. A. Bisphosphonates are antiresorptive drugs associated with MRONJ, although the absolute risk with oral osteoporosis therapy is low. History and planned procedures should be considered.

282. D. Medication changes should not be made unilaterally. Any decision about interruption must consider fracture risk, indication, and current professional guidance.

283. D. Routine nonsurgical periodontal treatment is appropriate and can reduce local inflammation, which is valuable in patients receiving antiresorptive therapy.

284. B. A nonrestorable tooth requires definitive dental evaluation. Antiresorptive therapy changes risk assessment but does not make needed dental treatment automatically impossible.

285. C. Active dental infection and inflammation are clinically important risk factors. Prevention and early treatment of oral disease are especially valuable in antiresorptive-treated patients.

286. A. Persistent exposed bone or failure of an extraction site to heal can be a sign of MRONJ and requires prompt professional evaluation.

287. C. Prevention and maintenance reduce the chance that advanced infection will require invasive procedures and support overall oral health.

288. B. MRONJ risk varies with drug potency, dose, duration, indication, comorbidities, and local factors. Oral osteoporosis regimens generally carry a lower risk than high-dose cancer therapy.

289. C. Complete medication and clinical documentation supports risk assessment and continuity of care without assigning an unconfirmed diagnosis.

290. D. Improved inflammatory measures indicate a favorable response to nonsurgical therapy and may reduce local oral infection burden.

291. A. Apixaban is a direct oral anticoagulant that inhibits factor Xa. It is mechanistically different from warfarin and antiplatelet drugs.

292. D. Stopping anticoagulation without appropriate medical guidance can increase thromboembolic risk. Medication management should be coordinated when procedural bleeding risk warrants it.

293. C. Bleeding risk depends on the planned procedure and patient factors including medication interactions, renal function, and prior bleeding.

294. C. Local pressure is a simple first-line hemostatic measure for minor oral bleeding. Systemic reversal or medication changes are not routine for uncomplicated hygiene procedures.

295. B. Combining anticoagulant and antiplatelet therapy can increase bleeding risk. The indication and prescriber plan should be understood before care.

296. D. Persistent uncontrolled bleeding requires further clinical management and may justify medical coordination or emergency care depending on severity.

297. B. Reducing local inflammation can reduce spontaneous and procedure-related gingival bleeding and remains an important component of care.

298. B. INR is standardized for warfarin monitoring and does not provide a routine quantitative measure of apixaban effect.

299. A. Careful instrumentation and confirmation of hemostasis improve safety for patients taking anticoagulants.

300. D. Clear post-treatment instructions help patients manage minor bleeding and recognize when persistent bleeding needs professional attention.

301. D. Repeated contact with gastric acid can dissolve tooth mineral, especially on palatal maxillary surfaces in patients with recurrent vomiting.

302. A. Neutralizing and clearing the acid is the immediate priority. Aggressive brushing while enamel is softened may increase surface loss.

303. A. Loss of enamel or cementum can expose dentinal tubules, producing short sharp pain from thermal, tactile, or osmotic stimuli.

304. B. Fluoride and desensitizing agents can support mineral resistance and reduce sensitivity while the underlying eating disorder is treated medically and behaviorally.

305. D. A respectful nonjudgmental approach supports trust and engagement. Dental professionals address oral consequences while encouraging coordinated medical and behavioral care.

306. A. Xerostomia reduces clearance and buffering and can increase caries risk, particularly when dietary or acid exposures are frequent.

307. A. Frequent acidic beverages add an external erosive challenge to gastric acid exposure and prolong the time teeth remain at low pH.

308. B. Recurrent vomiting and eating disorders can be associated with sialadenosis or enlargement of the parotid glands.

309. B. Clinical records should be factual, respectful, and focused on relevant history and oral findings without stigmatizing or speculative language.

310. C. Dental care should reduce oral harm and support prevention, while the underlying eating disorder requires coordinated medical and behavioral-health management.

311. D. Sjogren syndrome causes autoimmune damage and dysfunction of exocrine glands, especially salivary and lacrimal glands, leading to xerostomia and dry eyes.

312. D. Saliva normally buffers acids, clears carbohydrates, and supplies minerals. Severe reduction increases risk for cervical, root, and otherwise atypical caries sites.

313. B. Patients with severe xerostomia often require intensive fluoride exposure, plaque control, diet management, and close follow-up to reduce caries activity.

314. A. Sugar-free stimulants can increase residual salivary flow, while selected patients may benefit from prescription sialogogues after medical assessment.

315. A. Erythematous tissue beneath a removable prosthesis in a xerostomic patient is compatible with denture-associated Candida infection and should be evaluated and treated appropriately.

316. B. Daily prosthesis and tissue hygiene reduces biofilm burden and helps manage denture-associated inflammation. Cleaning methods should be compatible with the prosthesis materials.

317. A. Saliva lubricates food and mucosa and assists bolus formation and swallowing. Severe dryness commonly causes dysphagia for dry foods and oral soreness.

318. A. Frequent sugar exposures are especially hazardous when salivary clearance is poor. Water and noncariogenic moisture strategies are preferable.

319. B. High caries activity, candidiasis risk, and severe xerostomia justify closer preventive follow-up and adjustment of the care plan.

320. A. Successful management is reflected by disease stabilization, fewer new caries lesions, improved mucosal findings, and better daily comfort even if salivary function remains reduced.

321. A. Stroke-related weakness and dysphagia require thoughtful transfer assistance, positioning, suction, and pacing to reduce falls and aspiration risk.

322. C. A powered brush and enlarged handle can reduce fine-motor demands and help the patient clean more effectively with the stronger hand.

323. C. Holders and interdental brushes can reduce the bimanual dexterity required by traditional flossing and can be selected according to embrasure size.

324. A. Dysphagia can impair airway protection. High-volume evacuation, controlled water use, and appropriate positioning can reduce aspiration risk.

325. A. Aspirin irreversibly inhibits platelet cyclooxygenase and reduces aggregation. Medication history should be considered when anticipating bleeding.

326. D. Antiplatelet therapy is often prescribed to reduce recurrent vascular events. Stopping it without prescriber guidance can increase risk and is outside the hygienist's role.

327. A. Severely elevated or symptomatic blood pressure can signal acute risk and should prompt deferral and medical evaluation according to current clinical protocols.

328. C. Residual physical disability does not remove legal capacity. A capable adult retains the right to make healthcare decisions and provide consent.

329. A. Adaptive self-care preserves independence and autonomy. Caregiver assistance can be added with the patient's permission when tasks remain difficult.

330. C. Success combines oral disease stability with safe delivery of care adapted to the patient's neurologic and swallowing limitations.

331. D. Capacity is decision specific and should not be presumed absent because of a diagnosis. The patient should participate directly and provide consent when able.

332. C. Down syndrome is associated with increased periodontal susceptibility in many patients, making prevention, early assessment, and maintenance especially important.

333. C. Simple concrete communication and adequate response time support comprehension and autonomy without excluding the patient from the interaction.

334. B. Shared self-care can preserve independence while ensuring difficult areas are cleaned. Assistance should be respectful and consistent with the patient's preferences.

335. D. Active respiratory infection can increase coughing, secretion, and airway concerns. Elective care may need to be deferred until the patient is medically stable.

336. C. Shorter predictable visits can improve cooperation and reduce fatigue while still allowing complete care over multiple appointments.

337. D. Powered brushes can simplify motion demands and may improve plaque control when paired with individualized instruction and caregiver support.

338. B. Serial probing, attachment levels, bleeding, plaque, and radiographs when indicated are central to detecting periodontal progression.

339. D. Autonomy requires respecting the person's preferences and decision-making ability to the greatest extent possible, with supported decision making when helpful.

340. D. Higher periodontal susceptibility and existing attachment loss support closer maintenance and strong home-care support tailored to the patient's abilities.

341. B. Bleeding on probing with plaque and no progressive supporting bone loss is consistent with peri-implant mucositis rather than peri-implantitis.

342. C. Peri-implantitis includes inflammation plus progressive supporting bone loss. Mucositis is confined to the soft tissues.

343. D. Peri-implant mucositis is a plaque-associated inflammatory condition. The patient's limited interproximal cleaning provides a clear local risk factor.

344. B. Management focuses on biofilm control using techniques compatible with the implant and prosthesis, combined with improved daily self-care.

345. D. Appropriate interdental devices can disrupt plaque around implant-supported restorations without damaging tissues or the prosthesis.

346. B. Careful probing provides repeatable information on tissue inflammation and depth when interpreted with baseline measurements and radiographs.

347. D. Reduction in bleeding and plaque indicates resolution of soft-tissue inflammation. New bone loss, suppuration, or mobility would be concerning.

348. A. Serial comparison with baseline images helps distinguish stable remodeling from progressive bone loss when radiography is clinically justified.

349. D. The most obvious modifiable risk is inadequate biofilm control. Improving daily cleaning can reduce mucosal inflammation and risk of progression.

350. C. Implant maintenance should be risk based and include regular assessment of biofilm, soft tissues, probing trends, prosthesis condition, and bone levels when indicated.