

# Periodontology

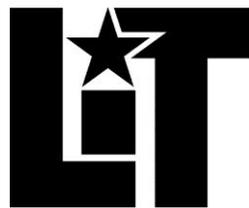
Lamar Institute of  
Technology

DHYG 1311

Course Syllabus

FALL

Taught by:  
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DHYG 1311: Periodontology  
Lecture Schedule: Monday and Wednesday, 8:00 – 9:15  
Room: MPC 112

LECTURE	TOPIC	ASSIGNMENT
1	Periodontal Care Plan Clinical Attachment Level Applications	Course syllabus pgs. 29-34 Nield-Gehrig, pgs. 337-339
2	Root Morphology Applications	*Darby and Walsh: Ch 19
	<b>Blackboard Assignment</b>	<b>Complete Review Quiz 1 online prior to class – Ch 1, 2</b>
3	The Periodontium in Health The Progression of Periodontal Disease	Nield-Gehrig, Ch 1, 2 Nield-Gehrig, Ch 3
4	Classification of Periodontal Diseases and Conditions Search for the Causes of Periodontal Disease	Nield-Gehrig, Ch 4 Nield-Gehrig, Ch 5
5	<b>Exam 1</b>	
6	<b>Complete Continuing Education Online course</b>	Complete on <b>dentalcare.com</b> <b>Immunological and Inflammatory Aspects of Periodontal Disease</b>
7	Oral Biofilms and Periodontal Infections	Nield-Gehrig, Ch. 6
8	Local Contributing Factors	Nield-Gehrig, Ch 7
9	Concepts of Immunity and Inflammation Host Immune Response to Periodontal Pathogens	Nield-Gehrig, Ch 8, 9
10	Continued	
11	Systemic Factors Associated with Periodontal Diseases	Nield-Gehrig, Ch 10 Online article and quiz <b>A Closer Look at the Evidence</b>
12	Etiologic Factors: Risk for Periodontitis	Nield-Gehrig, Ch 12
13	<b>Exam 2</b>	

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	TOPIC	ASSIGNMENT
	<b>Blackboard Assignment</b>	<b>Complete Review Quiz 2 online – includes information from Ch 13-20, 23</b>
<u>14</u>	Clinical Features of the Gingiva Diseases of the Gingiva	Nield-Gehrig, Ch 13, 14
<u>15</u>	Chronic Periodontitis Aggressive Periodontitis	Nield-Gehrig, Ch 15, 16
16	Other Periodontal Conditions Periodontitis as a Risk Factor for Systemic Disease	Nield-Gehrig, Ch 17, 18
17	Clinical Periodontal Assessment Radiographic Analysis of the Periodontium	Nield-Gehrig, Ch 19, 20
18	Continued	
19	Best Practices for Periodontal Care Decision Making During Treatment Planning for Patients with Periodontal Disease	Nield-Gehrig, Ch 22, 23
20	Continued	
21	<b>Exam 3</b>	
22	Periodontal Emergencies Non-Surgical Periodontal Therapy	Nield-Gehrig, Ch 33, 24
23	NSPT continued	
24	Patient’s Role in Nonsurgical Periodontal Therapy Host Modulation	Nield-Gehrig, Ch 26, 29
	<b>Blackboard Assignment</b>	<b>Complete Review Quiz 3 online prior to class covers Ch 30</b>

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	TOPIC	ASSIGNMENT
25	TMJ Disorders	
26	Periodontal Surgical Concepts	Neild-Gehrig, Ch 30
27	Continued	
28	Maintenance for the Periodontal Patient	Neild-Gehrig, Ch 31
29	Continued	
30	Future Directions for Management of Periodontal Patients	Neild-Gehrig, Ch 35
31	<b>Exam 4</b>	

## **Periodontology (DHYG 1311)**

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### **PREREQUISITE/ CO-REQUISITE COURSES**

Admittance to the dental hygiene program and all courses from previous semesters.

### **COURSE DESCRIPTION**

Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics.

### **COURSE GOALS**

**Upon completion of the curriculum, the student should be able to:**

1. Relate the normal histological and anatomical structure of the periodontium to the pathophysiology of the periodontal disease process.
2. Identify risk factors, periodontal bacteria and level of virulence in periodontal disease.
3. Identify and describe the diseases of the gingiva and periodontium including the etiology and pathogens.
4. Recognize the pathological physiology of systemic disease and its relationship to oral health and dental hygiene treatment.
5. Describe the biological basis of occlusal function and its role in occlusal trauma and periodontal disease.
6. Define the goals and rationale for surgical and non-surgical periodontal therapy.
7. Describe the methods and relationships of assessment tools in periodontal disease.
8. Identify the sequence, effectiveness, and objectives of nonsurgical periodontal therapy.
9. Apply knowledge of the etiology and process of periodontal disease to the essentials of a treatment plan necessary to restore health to these tissues.
10. Develop a value system stressing the importance of prevention, the knowledge base and skills required to assess periodontal health and disease in the individual patient.
11. Demonstrate a synthesis and application of knowledge of periodontology in the recognition and treatment of diseases.

### **CREDIT HOURS**

3 credit hours

### **CLASS MEETING TIME**

Monday and Wednesday – 8:00 – 9:15

### **INSTRUCTOR**

Michelle DeMoss, Instructor

Office: 211 Multi Purpose Center

Phone: 409-981-6814

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### COURSE POLICIES:

#### General Policy Statements:

#### 1. Attendance Policy

##### Absenteeism

- In order to ensure the students in the dental hygiene program achieve the necessary didactic and clinical competencies outlined in the curriculum, it is necessary that the student complete all assigned lecture classes, clinical and laboratory hours.
- If you are unable to attend lecture class, clinic or lab, it is **mandatory that you call the appropriate instructor prior to the scheduled class, clinic or lab time**. The student is responsible for all material missed at the time of absence. Extenuating circumstances will be taken into account. Extenuating circumstances might include: funeral of immediate family member, maternity, hospitalization, etc.
- It is expected that students will appear to take their exams at the regularly scheduled examination time. Make-up examinations will be given **only** if the absence is due to illness (confirmed by a physicians' excuse), a death in the immediate family, or at the discretion of the instructor.

##### Fall/Spring Semesters:

Dental hygiene students will be allowed **two** absences in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic or lab beyond the allowed absences, the following policy will be enforced:

2 absences = verbal warning

3 absences = written warning with the Disciplinary Action Form (DAF)

4 absences = grade will be lowered one full letter grade

##### Summer or 8 week Sessions:

Dental hygiene students will be allowed **one** absence in any lecture, clinic or lab. Absences must be accompanied by a written excuse on the next class day. In the event that a student misses class, clinic or lab beyond the allowed absences, the following policy will be enforced:

1 absence = verbal warning

2 absences = written warning with the Disciplinary Action Form (DAF)

3 absences = grade will be lowered one full letter grade

#### 2. Tardiness

- Tardiness is disruptive to the instructor and the students in the classroom. It is expected that students will arrive on time for class, clinic or lab, and remain until dismissed by the instructor. If tardiness becomes an issue, the following policy will be enforced:

Tardy 1 time = verbal warning

Tardy 2 times is considered an absence.

- 3. Electronic Devices** Electronic devices are a part of many individual's lives today. Devices such as tape recorders, radios, telephones, and paging devices, however, may be disturbing to faculty and classmates. Students, therefore, must receive the instructor's permission to operate all electronic devices in the classroom and clinic. Texting on cell phones or computers **will not be allowed** during class.

- 4. Late coursework.** Assignments must be completed by the due date. Late assignments will not be accepted and will result in a zero for that assignment.

**Americans with Disabilities Act (ADA).** The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things this statute requires that all students with documented disabilities be guaranteed a learning environment that provides for reasonable

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accommodations of their disabilities. If you believe you have a disability requiring an accommodation, please contact Special Populations Coordinator at 409-880-1737 or visit the office located in the Cecil Beeson Building, room 116B.

### **TEACHING METHODS**

Teaching methods will include:

- Lectures
- Discussion
- Class presentation
- Examinations
- Observation in a periodontal practice

### **REQUIRED TEXT**

- Nield-Gehrig, J. S., and Willmann, D.E. Foundations of Periodontics for the Dental Hygienist, 4<sup>th</sup> edition, Lippincott, Williams & Wilkins, 2015. ISBN 978-1-4511-9415-9

### **REFERENCES**

#### **Texts/References**

- Newman, MG, Takei, H, Klokkevold, PR, and Carranza, FA, Carranza's Clinical Periodontology, 10<sup>th</sup> edition, W. B. Saunders. 2006.
- Vernino, A, Gray, J, and Hughes, E. The Periodontic Syllabus, 5<sup>th</sup> edition, Lippincott Williams & Wilkins, 2008.
- Wolf, HF, Hassell TM, Periodontology: Color Atlas of Dental Hygiene, Thieme, 2006.
- Perry, AP, Beemsterboer, P, and Taggart, EJ, Periodontology for the Dental Hygienist, 3<sup>rd</sup> edition, W.G. Saunders Co, 2007.
- Darby, ML, Walsh, MM, Dental Hygiene Theory and Practice, 3<sup>rd</sup> edition, Elsevier, 2010.
- Thomson, E, Bauman, D, Shuman, D, and Andrews, E, Case Studies in Dental Hygiene, 2<sup>nd</sup> edition, Prentice Hall, 2009
- Genco, RJ, Williams, RC, Editors, Periodontal Disease and Overall Health: A Clinician's Guide, Professional Audience Communications, Inc., 2010.

#### **Websites**

- American Academy of Periodontology: [www.perio.org](http://www.perio.org)
- Cochrane Collaboration: <http://www.cochrane.org>
- Pubmed: <http://www.pubmed.gov>
- American Dental Association Center for Evidence-based Dentistry: <http://ebd.ada.org/>

### **COURSE REQUIREMENTS**

#### **Class Participation**

Review Appendix for instructions and criteria for grade.

#### **Periodontal Article Review**

Students will be required to review and provide a written summarization of a current periodontal journal article. See Appendix for instructions and evaluation form.

#### **Periodontal Office Observation**

Students will be required to observe in the office of a periodontist for a four hour period. See Appendix for instructions.

#### **Periodontal Care Plan**

A periodontal case will be completed consisting of a Part I and a Part II write-up. See Appendix for criteria, instructions, and evaluation form.

#### **Examinations (4)**

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**EVALUATION CRITERIA**

Exams (4)	65%
Periodontal Article review	10%
Periodontal Care Plan	20%
Class Participation grade	5%
Periodontist Office Visit	<u>0%</u>
	100%

**GRADE SCALE:**

- A = 92 - 100
- B = 83 - 91
- C = 75 - 82
- F = 74 and below

**CONTENT OUTLINE**

1. Requirements and Introduction to Periodontology

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2. Root Morphology Applications
  - a. Width and length of the root
  - b. Shape of the root in buccolingual and mesiodistal direction
  - c. Clinical attachment level relative to the root length
  - d. Curvature of CEJ in anterior and posterior teeth
  - e. Size of embrasive area
  - f. Length of contact area
  - g. Factors which influence crestal alveolar bone
  - h. Smoothness of CEJ
  - i. Furcations
  
3. The Periodontium in Health
  - a. Tissues of the periodontium
  - b. Nerve supply, blood supply, and lymphatic system
  - c. Histology of the body tissues
  - d. Histology of the gingiva
  - e. Histology of root cementum and alveolar bone
  
4. The Progression of Periodontal Disease
  - a. The periodontium in health and disease
  - b. Pathogenesis of bone destruction
  - c. Periodontal pockets
  
5. Classification of Periodontal Diseases and Conditions
  - a. Introduction to disease classification
  - b. Classification systems
  - c. AAP classification system for periodontal diseases
  - d. Overview of periodontal diseases
  
6. Search for the Causes of Periodontal Diseases
  - a. Epidemiology: Researching periodontal disease
  - b. Control and progression of periodontal disease
  - c. Risk factors for periodontal disease
  
7. Oral Biofilms and Periodontal Infections
  - a. Bacteria in the oral environment
  - b. Bacteria associated with periodontal health and disease
  - c. The structure and colonization of plaque biofilms
  - d. Mechanisms of periodontal destruction
  - e. Control of plaque biofilms
  
8. Local Contributing Factors
  - a. Mechanisms for increased disease risk
  - b. Local factors that increase plaque biofilm retention
  - c. Local factors that increase plaque biofilm pathogenicity
  - d. Local factors that cause direct damage
  
9. Immunity, Inflammation and the Host Response to Periodontal Pathogens
  - a. The body's defense system
  - b. Components of the immune system
  - c. Leukocyte migration, chemotaxis, and phagocytosis
  - d. The inflammatory process

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- e. The role of host response in periodontal disease
  - f. Pathogenesis of inflammatory periodontal disease
10. Systemic Factors Associated with Periodontal Diseases
- a. Systemic risk factors for periodontitis
  - b. Genetic risk factors for periodontitis
  - c. Systemic medications with periodontal side effects
11. Etiologic Factors: Risk for Periodontitis
- a. Risk factors for periodontal disease
  - b. Balance between periodontal health and disease
12. Clinical Features of the Gingiva and Diseases of the Gingiva
- a. Clinical features of healthy gingiva and gingival inflammation
  - b. Extent and distribution of inflammation
  - c. Classification of gingival diseases
  - d. Dental plaque-induced gingival disease
  - e. Non-plaque induced gingival lesions
13. Chronic Periodontitis and Aggressive Periodontitis
- a. Classification of periodontitis
  - b. Chronic periodontitis – the most common form
  - c. Aggressive periodontitis – highly destructive form
14. Other Periodontal Conditions and Periodontitis as a Risk Factor for Systemic Disease
- a. Periodontitis as a manifestation of systemic disease
  - b. Necrotizing periodontal diseases
  - c. Developmental or acquired deformities and conditions
  - d. Periodontitis and systemic disease
15. Clinical Periodontal Assessment and Radiographic Analysis of the Periodontium
- a. The assessment process – responsibilities, legal considerations and documentation
  - b. The Periodontal Screening Examination
  - c. The comprehensive periodontal assessment
  - d. Clinical features that require calculations
  - e. Radiographic appearance of the periodontium
  - f. Use of radiographs for periodontal evaluation
16. Best Practices for Periodontal Care and Decision Making  
During Treatment Planning for Patients with Periodontal disease
- a. What is best practice?
  - b. The role of evidence-based care in best practice
  - c. Decisions related to assigning a periodontal diagnosis
  - d. Decisions related to treatment sequencing
  - e. Informed consent for periodontal treatment
17. Periodontal Emergencies
- a. Abscesses of the periodontium
  - b. Necrotizing periodontal diseases
18. Nonsurgical Periodontal Therapy
- a. Overview of nonsurgical periodontal therapy (NSPT)
  - b. Nonsurgical instrumentation

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- c. Decisions following nonsurgical periodontal therapy
19. Patients Role in Nonsurgical Therapy and Host Modulation
- a. Patient self-care
  - b. Patient-performed interdental care
  - c. Anatomical challenges for interdental care for the periodontitis patient
  - d. Introduction to the concept of host modulation
  - e. Host modulation as part of comprehensive periodontal management
20. Temporomandibular joint disorders
- a. The temporomandibular joint
  - b. TM dysfunction/pathology
    - 1. Epidemiology of TM dysfunction
    - 2. Types of dysfunction
    - 3. Symptoms
    - 4. Identification and examination techniques
    - 5. Treatment goals and methods of treatment
    - 6. Dental hygiene appointment modifications
21. Periodontal Surgical Concepts for the Dental Hygienist
- a. Introduction to periodontal surgery
  - b. Understanding the periodontal flap
  - c. Description of common types of periodontal surgery
  - d. Biological enhancement of surgical outcomes
  - e. Management following periodontal surgery
22. Maintenance for the Periodontal Patient
- a. Introduction to periodontal maintenance
  - b. Procedures and planning for periodontal maintenance
  - c. Disease recurrence and patient compliance
  - d. Root caries as a complication during periodontal maintenance
23. Future Directions for Management of Periodontal Patients
- a. Diagnostic technology for periodontal diseases
  - b. Periodontal disease/systemic disease connection
  - c. Treatment modalities in periodontal care

### **LEARNER OBJECTIVES**

Upon completion of unit the student will be able to:

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#### **ROOT MORPHOLOGY**

1. Relate the shape of the clinical instrument to root morphology.
2. Describe axial positioning and its importance in instrumentation.
3. Recognize the factors which influence the shape of crestal alveolar bone.
4. Evaluate the level of clinical attachment relative to the length of the tooth.
5. Identify and discuss the anatomical characteristics of root surfaces that affect instrument selection and instrument use, including root shape, root proximity, width, and length; curvature of the CEJ; contact areas; furcation location, width, vertical and horizontal dimensions, and relationship of gingival.
6. Discuss the variation of the CEJ and its clinical importance.

#### **THE PERIODONTIUM IN HEALTH**

1. Describe the nerve and blood supply to the periodontium.
2. Explain the role of the lymphatic system in the health of the periodontium.
3. Demonstrate knowledge of the tissues of the periodontium by applying concepts to patient cases.
4. Discuss the importance of the periodontium in the study of periodontology.
5. Compare and contrast the component tissues, their characteristics, and the functions of the periodontium.
6. Compares the microscopic anatomy of the gingival epithelium, junctional epithelium, and gingival connective tissue.
7. Compares the microscopic anatomy of the periodontal ligament, periodontal attachment apparatus, cementum, and alveolar bone.
8. Compare and contrast the terms desmosome and hemidesmosome.
9. Relates keratinization to the gingiva, alveolar mucosa, buccal mucosa, and palate.
10. Explain the factors that influence gingival contour, consistency, surface, and position.
11. Compare and contrast the principle fibers of the periodontal ligament and their functions.
12. Describe the function of the cementum and alveolar bone in the periodontium.
13. Describe the function the function of the gingival connective tissue and the supragingival fiber bundles.

#### **THE PROGRESSION OF PERIODONTAL DISEASE**

1. Compare and contrast the clinical and histologic characteristics of the periodontium in health, gingivitis, and periodontitis
2. Distinguish clinically the signs of health, gingivitis and periodontitis
3. Describe the position of the crest of the alveolar bone in health, gingivitis, and periodontitis
4. Describe the position of the junctional epithelium in health gingivitis, and periodontitis.
5. Describe the epithelial-connective tissue junction in health, gingivitis, and periodontitis.
6. Explain the significance of intact transseptal fibers in severe bone loss.
6. Describe the progressive destruction of alveolar bone loss that occurs in periodontitis.
7. Compare and contrast horizontal and vertical bone loss.
8. Describe the pathway of inflammation that occurs in horizontal and vertical bone loss.
9. Define the terms active disease site and inactive disease site.
10. Compare and contrast the types of pockets seen in periodontal disease.

#### **CLASSIFICATION OF PERIODONTAL DISEASES AND CONDITIONS**

1. List, describe, and differentiate the various periodontal diseases according to the 1999 classification system established by the American Academy of Periodontology.
2. Compare and contrast the terms periodontal disease, gingivitis, and periodontitis.
3. Contrast the terms plaque-induced gingival diseases and non-plaque-induced gingival lesions.
4. Differentiate chronic periodontitis and aggressive periodontitis.

#### **SEARCH FOR THE CAUSES OF PERIODONTAL DISEASE**

1. Describe variables associated with periodontal disease that an epidemiologist might include in a

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- research study.
- Identify prevalence and incidence as measurements of periodontal disease within the population
- Discuss the historical theories and current theories associated with the progression of periodontal disease.
- Describe how clinical dental hygiene practice can be affected by epidemiologic research.

### **ORAL BIOFILMS AND PERIODONTAL INFECTIONS**

- Explain the terms innocuous, pathogenic, virulent, Gram-positive and Gram-negative.
- Describe the components of the biofilm structure.
- Explain the significance of the extracellular slime layer to a bacterial microcolony.
- Explain the purpose of the fluid channels in a biofilm
- Explain why systemic antibiotics and antimicrobial agents are not effective in eliminating dental plaque biofilms.
- Explain the significance of coaggregation in bacterial colonization of the tooth surface..
- Explain the most effective ways to control dental plaque biofilms.
- Describe how the numbers of bacteria vary from health to disease in the periodontium.
- Name the three bacteria designated by the World Workshop in Periodontology as periodontal pathogens.
- Identify the specific bacteria associated with health, gingival diseases, and periodontitis.
- Describe Socransky's Microbial Complexes.
- Compare the three zones of subgingival plaque biofilm.
- Compare exotoxins and bacterial enzymes.
- Describe the virulence factors of the three bacteria designated as periodontal pathogens.

### **LOCAL CONTRIBUTING RISK FACTORS**

- Explain the meaning of the phrase "pathogenicity of plaque biofilm".
- Explain how and what local contributing factors can increase plaque retention.
- Analyze the significance of local contributing factors which can lead to an increased pathogenicity of plaque.
- Describe the local contributing factors that can lead to direct damage to the periodontium.
- Determine the components and their widths in health of the biologic width.
- Describe the role of trauma from occlusion as a contributing factor in periodontal disease.

### **BASIC CONCEPTS OF IMMUNITY AND INFLAMMATION**

- Explain the primary function of human immune system.
- Identify two events that can trigger the inflammatory response.
- Explain what events in tissues result in the classic symptoms of acute inflammation.
- Describe the steps in the process of phagocytosis.
- Describe the role of PMNs, macrophages, B and T lymphocytes in the immune system.
- Compare the terms macrophage and monocyte.
- Describe the main ways that antibodies participate in the host defense.
- Define the term inflammatory mediator and name the types of mediators.
- Relate the functions of cytokines, prostaglandins, and matrix metalloproteinases (MMP) in the host response to periodontal disease.
- Explain the principal functions in the immune response of the complement system.

### **HOST IMMUNE RESPONSE TO PERIODONTAL PATHOGENS**

- Define the term biochemical mediator and three types of mediators.
- Describe the tissue destruction that can be initiated by the biochemical mediators secreted by immune cells.
- Describe the sequential development of periodontal disease.
- Describe the role of the host response in the severity and tissue destruction seen in periodontitis.

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5. Explain the immunologic interactions of the host in periodontal diseases.
6. Describe and differentiate the mechanisms of tissue destruction in periodontal disease.
7. Describe and discuss current knowledge of the immunopathology of periodontal disease.
8. Examine the periodontium of a patient with gingivitis, point out the signs of inflammation, and describe the underlying inflammatory process occurring.

### **SYSTEMIC CONTRIBUTING FACTORS**

1. Differentiate between local and systemic contributing factors.
2. Explain how systemic and genetic factors may modify or amplify the host response to periodontal pathogens.
  - a. Diabetes Mellitus
  - b. Leukemia
  - c. Acquired Immunodeficiency Syndrome
  - d. Osteoporosis
  - e. Hormonal variations
  - f. Down Syndrome
  - g. Abnormal PMN function
3. Explain how systemic medications may modify periodontal disease.

### **ETIOLOGIC FACTORS: RISK FOR PERIODONTITIS**

1. Define the term biologic equilibrium and discuss factor that can disrupt the balance between health and disease in the periodontium.
2. Evaluate a list of periodontal risk factors of a factitious patient and suggest strategies for managing these risk factors.

### **CLINICAL FEATURES OF THE GINGIVA**

1. Compare and contrast clinical features of healthy and inflamed gingival tissue.
2. Given the clinical features of a patient determine if the gingival tissue is healthy or unhealthy.

### **GINGIVAL DISEASES**

1. Name and define the two major subdivisions of gingival disease as established by the American Academy of Periodontology.
2. Compare and contrast dental plaque-induced gingival diseases and non-plaque-induced gingival lesions.
3. Discuss how systemic factors may modify gingival disease.
4. Explain how certain medications and malnutrition can modify gingival disease.

### **CHRONIC PERIODONTITIS**

1. Name and define the three major categories of periodontitis.
2. Recognize and describe clinical and radiographic features of chronic periodontitis.
3. Explain the significance of clinical attachment loss.
4. In the clinical setting, explain to your patient the signs and symptoms of chronic periodontitis
5. Explain the term severity, extent, and progression of chronic periodontitis.
6. List systemic factors that may be contributing factors to chronic periodontitis.
7. Explain desired outcomes and determinants of long-term outcomes following treatment of chronic periodontitis.
8. Explain recurrent chronic periodontitis.
9. Explain refractory chronic periodontitis.

### **AGGRESSIVE PERIODONTITIS**

1. Compare and contrast the clinical and radiographic features of chronic periodontitis and aggressive periodontitis.
2. Discuss the differences between ideal and reasonable treatment goals for aggressive periodontitis.

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3. Given the clinical and radiographic features for a patient with a history of aggressive periodontitis, determine if the disease is localized or generalized aggressive periodontitis.

### **OTHER PERIODONTAL CONDITIONS**

1. Name the less common forms of periodontitis.
2. Name and explain systemic or genetic factors that may contribute to the initiation and progression of periodontitis.
3. Describe the impact of PMN (neutrophil) dysfunction on the periodontium.
4. Describe what is meant by necrotizing diseases.
5. Describe the tissue destruction that occurs in necrotizing periodontal diseases.
6. Compare and contrast the clinical findings of necrotizing ulcerative gingivitis and necrotizing ulcerative periodontitis.
7. Compare and contrast the tissue destruction in chronic periodontitis with that seen in necrotizing ulcerative periodontitis.
8. Explain how local factors may contribute to the initiation and progression of periodontitis.
9. Explain how secondary occlusal trauma can lead to rapid bone loss.

### **PERIODONTITIS AS A RISK FACTOR FOR SYSTEMIC DISEASE**

1. Discuss and provide examples of how the presence of systemic disease may increase the likelihood of disease initiation or the severity of periodontitis.
2. Discuss the biologic explanations for the relationship between systemic disease and periodontitis.
3. Apply the risk factors to the appropriate patient, provide education, and encourage oral disease prevention and treatment services.

### **CLINICAL PERIODONTAL ASSESSMENT**

1. Explain which members of the dental team are responsible for the clinical assessment.
2. Compare and contrast a periodontal screening examination and a comprehensive periodontal assessment.
3. Describe how to evaluate each component of a comprehensive periodontal assessment.
4. Given several clinical scenarios determine the clinical attachment level.
5. Apply content from chapter to fictitious patient cases.

### **RADIOGRAPHIC ANALYSIS OF THE PERIODONTIUM**

1. Compare and contrast radiographic characteristics of normal and abnormal alveolar bone.
2. Compare and describe early radiographic evidence of periodontal disease.
3. Differentiate between vertical and horizontal bone loss.
4. Recognize potential etiologic agents for periodontal disease radiographically.
5. Apply content from chapter to fictitious patient cases.

### **BEST PRACTICES FOR PERIODONTAL CARE**

1. Define the term best practice.
2. Explain the term evidence-based healthcare.
3. Identify the three components of evidence-based decision making.
4. Define a systemic review.
5. List locations for accessing systemic reviews.
6. Describe the role of the patient in the evidence-based model.
7. Identify the levels of evidence in scientific research.

### **DECISION MAKING DURING TREATMENT PLANNING**

1. List the three fundamental diagnostic questions used when assigning a periodontal diagnosis.
2. Explain how to arrive at appropriate answers to each of the fundamental diagnostic questions.
3. Explain the difference between the terms signs of a disease and symptoms of a disease.
4. Explain what is meant by the term silent disease.

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5. Discuss the classical phases of therapy and the treatment rendered during each phase.
6. Identify the phases of periodontal treatment of paramount importance to the dental hygienist.
7. Explain the importance of informed consent and documentation of treatment.
8. List guidelines for obtaining informed consent.

### **PERIODONTAL EMERGENCIES**

1. Describe the types of abscesses of the periodontium
2. Define the terms acute and circumscribed.
3. Describe the possible causes of abscesses of the periodontium
4. Compare and contrast the abscess of the periodontium and the endodontic abscess.
5. Outline the typical treatment steps for a gingival abscess and a periodontal abscess.
6. Describe the clinical situation that can result in a pericoronal abscess.
7. Outline the typical treatment for a pericoronal abscess.
8. Outline the typical treatment steps for necrotizing ulcerative gingivitis.

### **NONSURGICAL PERIODONTAL THERAPY (NSPT)**

#### **Phase I Therapy**

1. Explain the term nonsurgical periodontal therapy (NSPT).
2. Discuss the indication for, goals and components of nonsurgical periodontal therapy.
3. Describe a typical plan for NSPTD for a patient with plaque-induced gingivitis, slight chronic periodontitis, and with moderate chronic periodontitis.
4. Compare and contrast the terms periodontal debridement and deplaquing.
5. Describe the type of healing to be expected following successful instrumentation of root surfaces.
6. Describe a strategy for managing dental hypersensitivity during nonsurgical therapy.
7. Explain why reevaluation is a critical step during nonsurgical therapy.
8. List steps in an appointment for reevaluation of the results of nonsurgical therapy.
9. Explain the decisions to be made during the reevaluation appointment.
10. Explain current American Academy of Periodontology recommendations for deciding which patients should be managed by a periodontist.

### **PATIENT'S ROLE IN NONSURGICAL THERAPY**

1. Discuss the concept of self-care and the roles of the patient and provider in the periodontal patient.
2. Give examples of oral conditions that might prompt a power toothbrush recommendation.
3. Discuss the rationale for tongue cleaning.
4. Explain the special importance of interdental care for a patient with periodontitis.
5. Describe the term gingival embrasure space and explain its importance in selecting interdental aids.
6. Relate specific root concavities to the importance in selecting effective interdental aids.
7. In a clinical setting, recommend, explain, and demonstrate appropriate interdental aids to a patient with type I - III embrasures. Assist the patient in selecting and appropriate interdental aid that the patient is willing to use on a daily basis.

### **HOST MODULATION**

1. Explain the term host modulation.
2. Explain the potential importance of host modulation.
3. Identify some anti-inflammatory mediators.
4. Identify some proinflammatory mediators.
5. Identify and discuss some potential host modulating agents.
6. Explain the term sub-antibacterial dose.
7. Discuss the treatment strategies for a periodontitis patient that includes host modulation.

### **TMJ DISORDERS**

1. Define the role of the dental hygienist in the detection of occlusal abnormalities and jaw

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- dysfunction.
2. Describe the biologic basis of occlusal function and the adaptive capability of the oral system.
3. Describe the cause and list the common signs and symptoms of temporomandibular disorders.
4. Describe the procedures for clinically assessing jaw function and occlusion in a screening examination.
5. Identify the various modalities used to treat temporomandibular disorders.
6. State the factors which are implicated in the cause of TMD and appropriate follow-up questions to ask a patient suspected of having TMD.
7. List the symptoms suggestive of temporomandibular dysfunction.
8. List the types of TMDs.

### **PERIODONTAL SURGICAL CONCEPTS FOR THE DENTAL HYGIENIST**

1. Identify the objectives of periodontal surgery.
2. Explain the term relative contraindication for periodontal surgery.
3. Define the terms repair, reattachment, new attachment, and regeneration.
4. Explain the difference between healing by primary intention and healing by secondary intention.
5. Explain the term elevation of a flap.
6. Explain 2 methods for classification of periodontal flaps.
7. Describe two types of incisions used during periodontal flaps.
8. Describe healing following flap for access and open flap debridement.
9. Describe the typical outcomes for apically positioned flap with osseous surgery.
10. Define the terms ostectomy and osteoplasty
11. Define the terms osteoinductive and osteoconductive.
12. Explain the terms autograft, allograft, xenograft, and alloplast.
13. Identify two types of materials available for bone replacement grafts.
14. Explain why a barrier material is used during guided tissue regeneration.
15. Explain the term periodontal plastic surgery.
16. List two types of crown lengthening surgery.
17. List some disadvantages of a gingivectomy
18. Explain what is meant by biological enhancement of periodontal surgical outcomes.
19. List the general guidelines for suture removal.
20. List general guidelines for periodontal dressing management.
21. Explain the important topics that should be covered in postsurgical instruction.
22. List the steps of a typical postsurgical visit.

### **PERIODONTAL MAINTENANCE FOR THE PERIODONTAL PATIENT**

1. Explain the term periodontal maintenance.
2. List three objectives of periodontal maintenance.
3. Describe how periodontal maintenance relates to other phases of periodontal treatment.
4. Explain the procedures performed during a patient appointment for periodontal maintenance.
5. Define the term baseline data.
6. Describe the guidelines for determining whether the general or the periodontal practice should provide periodontal maintenance for a particular patient.
7. Describe how to establish an appropriate maintenance interval.
8. Recognize the clinical signs of recurrence of periodontitis and determine the potential contributing factors.
9. Explain the term compliance.
10. Recognize the importance of patient compliance with periodontal maintenance, and describe strategies to improve compliance with recommended maintenance intervals and oral hygiene regimens.
11. Describe the recommendations for the use of fluorides in the prevention of root caries.

### **FUTURE DIRECTIONS FOR MANAGEMENT OF PERIODONTAL PATIENTS**

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1. Describe some strategies in the management of periodontal patients that are being studied and may result in new recommendations for treatment.

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Student Name: \_\_\_\_\_

Exams \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ = Avg. \_\_\_\_\_ X .65 = \_\_\_\_\_

Periodontal Article Review \_\_\_\_\_ = Avg. \_\_\_\_\_ X .10 = \_\_\_\_\_

Periodontal Care Plan \_\_\_\_\_, \_\_\_\_\_ = Avg. \_\_\_\_\_ X .20 = \_\_\_\_\_

Class Participation grade \_\_\_\_\_ \_\_\_\_\_ X .05 = \_\_\_\_\_

Periodontal office observation completed \_\_\_\_\_

**FINAL GRADE** \_\_\_\_\_