

Contents

1	Fundamentals	1
1.1	Introduction	1
1.2	Anatomy	1
1.2.1	Gingival Anatomy with Respect to Periodontal Diseases or Deformation	1
1.2.2	Gingival and Tooth Anatomy with Respect to Professional Hygiene Therapy	5
1.2.3	Gingival and Tooth Anatomy with Respect to Patient Hygiene Therapy	9
1.2.4	Summary	9
1.3	Periodontal Examination	10
1.4	Diagnosis of Periodontal Diseases and Caries	13
1.4.1	Gingivitis	13
1.4.2	Periodontitis	14
1.4.3	Peri-implant Mucositis	15
1.4.4	Peri-implantitis	16
1.4.5	Dental Caries	16
1.4.6	Conclusion	16
1.5	Etiology	16
1.6	Prognosis	17
1.7	Summary	19
	Further Reading	19
2	Empowering Your Patients: From Compliance to Concordance	21
2.1	Introduction	21
2.2	Motivation of the Dental Patient to Remove Biofilm (Dental Plaque)	23
2.3	Assurance That the Techniques Patients Are Using Are Effective and Correct	26
2.4	Access: The Patient Must Be Able to Access the Root for Plaque Removal	26
2.4.1	Probing Depth	27
2.4.2	Supra- and Subgingival Calculus, Rough Roots	29
2.4.3	Tooth Anatomic Irregularities	29
2.4.4	Gingival Morphologic Alterations	29
2.4.5	Malposed Teeth	30

2.4.6	Orthodontic Appliances	31
2.4.7	Defective Restorative Margins	31
2.4.8	Provisional Fixed Restorations	31
2.4.9	Tactile Root Sensitivity	32
2.4.10	Improper Plaque Removal Techniques	32
2.4.11	Improper Toothbrush Due to Bristle Stiffness, Type of Bristle, or Design of Brush Head	32
2.4.12	Defective Toothbrush Due to Wear	33
2.4.13	Ineffectual Dental Floss Technique or Floss Material	34
2.4.14	Dental Implant Design	34
2.4.15	Dental Implant-Supported Prostheses	34
2.5	Summary	35
	Further Reading	36
3	Methods of Plaque Removal by the Patient	37
3.1	Detection of Dental Plaque with the Use of Disclosing Agents	37
3.2	Bleeding on Probing (BOP)	40
3.3	Using BOP for Motivation	42
3.4	Supra- and Subgingival Calculus	43
3.4.1	Calculus	43
3.4.2	Attachment of Calculus to the Tooth Surface	43
3.5	Detection of Supragingival Calculus Including Instruments, Materials, and Techniques	45
3.5.1	Supragingival Calculus Detection	45
3.5.2	Subgingival Calculus Detection	45
3.6	Toothbrushes: Manual	45
3.7	Toothbrushes: Power	48
3.8	Tooth Brushing Techniques: Hand Brush	49
3.8.1	The Bass Technique (BT)	51
3.8.2	The Modified Bass Technique (MBT)	52
3.8.3	The Stationary Bristle Technique (SBT)	52
3.8.4	The Stillman's Technique (ST)	55
3.9	Tooth Brushing Techniques: Power Brush	56
3.10	Hand and Power Tooth Brushing with Fixed Orthodontic Appliances	56
3.11	Conclusion: Tooth Brushing	57
3.12	Interproximal Plaque Removal	57
3.12.1	Dental Floss/Tape	57
3.13	An Effective Technique for Flossing	59
3.14	Interproximal Brushes	60
3.15	Other Interproximal Cleaning Devices	62
3.15.1	Rubber Tips	62
3.15.2	Floss Threaders	62
3.15.3	Toothpick-Type Devices	63
3.15.4	Other Means of Reducing Oral Bacteria	64
3.16	Summary	68
	Further Reading	69

4 Patient Examination and Assessment	71
4.1 Preparation for Patient Encounter: Operatory, Instrument, and Materials Arrangement	71
4.1.1 Patient/Provider Positioning and Operator Visibility	71
4.2 Patient Interview and Initial Examination	77
4.2.1 The Patient's Chief Complaint	77
4.2.2 Patient's Expectations	77
4.2.3 Baseline Vitals	77
4.2.4 Medical/Social History	78
4.2.5 Dental History	78
4.2.6 Daily Oral Hygiene Habits	79
4.2.7 Oral Habits	79
4.2.8 Extraoral Exam	79
4.2.9 Intraoral Soft Tissue Examination	80
4.2.10 Gingival Tissue Evaluation	81
4.3 Periodontal Charting	82
4.3.1 Probing Depth Measurements	82
4.3.2 Bleeding on Probing	86
4.3.3 Recession Measurement	87
4.3.4 Amount of Attached Gingiva	90
4.3.5 Mucogingival Deformities	92
4.3.6 Tooth Mobility	93
4.3.7 Fremitus	93
4.3.8 Furcation Involvement	94
4.3.9 Calculus Detection	95
4.3.10 Plaque	96
4.3.11 Gingival Index	98
4.4 Radiographic Interpretation	99
4.4.1 Intraoral Radiographs	99
4.4.2 Extraoral Radiographs	100
4.4.3 Characteristics of an Acceptable Radiograph	102
4.4.4 Analysis and Interpretation of Completed Radiographs	102
4.4.5 Radiographic Changes in Periodontal Disease	103
4.4.6 Additional Periodontal Documentation	104
4.5 Summary	104
Further Reading	105
5 Instrumentation for Diagnosis and Basic Treatment of Gingivitis/Periodontitis	107
5.1 Principles for Proper Use of Periodontal Instrumentation	107
5.1.1 Grasp	107
5.1.2 Wrist Position	107
5.1.3 Fulcrum (Finger Rest Position)	107
5.1.4 Adaptation	109
5.1.5 Angulation	109

5.1.6	Lateral Pressure	109
5.1.7	Strokes (Activation of the Instrument).	110
5.2	Periodontal Instrumentation: Armamentarium	110
5.2.1	Classification of Periodontal Instruments	110
5.2.2	Introduction to Periodontal Instruments.	110
5.3	Diagnostic Instruments	111
5.3.1	Dental Mirror or Mouth Mirror	111
5.3.2	Air/Water Syringe	112
5.3.3	Periodontal Probes	112
5.3.4	Periodontal Probing: What Is Its Value?	113
5.3.5	The Ten Critical Applications of the Periodontal Probe.	113
5.3.6	Functions of the Periodontal Probe	113
5.3.7	Automated Periodontal Probes.	113
5.3.8	Explorers	113
5.4	Periodontal Hand Instrumentation	114
5.4.1	Scalers	114
5.4.2	Curettes	116
5.4.3	Comparison of the Working Edges of: Universal Scalers, Universal Curettes, and Gracey Curettes . . .	119
5.5	Adjunctive Hand Instruments	119
5.6	Power Instrumentation.	120
5.6.1	Sonic, Magnetostrictive Ultrasonic, and Piezoelectric Instruments	120
5.6.2	Advantages and Disadvantages of Power Instruments	122
5.7	Polishing Instruments.	123
5.7.1	Rubber Cup	123
5.7.2	Air-Powder Polishing.	124
5.8	Instrument Sharpening.	125
5.8.1	Instrument Sharpening Theory.	125
5.8.2	Sharpening Techniques for Hand Instruments.	127
5.9	Summary	130
	Further Reading	131
6	Therapy	133
6.1	Phasing of Therapy	133
6.1.1	Advantages of Phasing Treatment Plans	133
6.1.2	Phase I Therapy	134
6.1.3	Phase II Therapy	139
6.1.4	Phase III Therapy.	140
6.1.5	Phase IV Therapy (see Chap. 8).	140
6.2	Clinical Treatment	140
6.2.1	The Rationale for Dental Prophylaxis and Scaling and Root Planing Procedures	140
6.2.2	Scaling	140
6.2.3	Root Planing.	141
6.2.4	Gingival Curettage: Coincidental vs. Closed.	142

6.3	Patient Management Protocol for the Dental Prophylaxis Procedure	144
6.3.1	Patient Management Protocol for the Scaling and Root Planing Procedure	147
6.3.2	Therapy Choices for Specific Clinical Situations . . .	150
6.3.3	Summary	151
6.4	Local Anesthesia Necessary for Scaling and Root Planing	151
6.4.1	Anatomy for Periodontal Local Anesthesia	151
6.4.2	Non-injectable Topical Anesthesia	152
6.4.3	Injectable Local Anesthesia	152
6.4.4	Injection Techniques	154
6.4.5	Used for Both Maxillary and Mandibular Anesthesia	154
6.4.6	Summary	159
6.5	Treatment of Dentinal Hypersensitivity Associated with Periodontal Therapy	160
6.5.1	Etiology and Treatment Options	160
6.6	Treatment Modalities for Dentinal Hypersensitivity	160
6.6.1	Treatment Recommendations	161
6.6.2	Summary	161
	Further Reading	162
7	Adjunctive Therapy	163
7.1	Pharmacotherapeutics	163
7.1.1	Introduction	163
7.1.2	Systemic Antibiotics	163
7.1.3	Local Delivery Antibiotic Therapy	164
7.1.4	Conclusions	165
7.2	The Importance of Smoking Cessation	166
7.2.1	Introduction	166
7.2.2	The Systemic Impact of Tobacco Use	166
7.2.3	The Dental Implications of Tobacco Use	167
7.2.4	The Role of the Dental Practitioner in Smoking Cessation	167
7.2.5	Pharmacological Therapies for Smoking Cessation	168
7.2.6	E-Cigarettes and Electronic Nicotine Delivery Systems (ENDS)	168
7.2.7	Smoking Cessation Counseling and Referrals	168
7.2.8	Five Major Steps to Intervention (The "5 As")	168
7.2.9	Stages of Readiness	169
7.3	Laser Therapy	169
7.4	Oral Bacterial Culturing and Sensitivity Testing	170
7.5	DNA Probe Sampling	171
7.6	Periodontal Endoscope	171
	Further Reading	171

8	Maintenance Therapy/Necessary for Long-Term Success	175
8.1	Introduction	175
8.1.1	The Maintenance Therapy Program	175
8.2	Getting Started	176
8.2.1	High-Risk Patients	176
8.3	Treatment Principles Regarding the Prevention of Gingivitis and Periodontitis	176
8.4	Basic Features of a Structured Maintenance Therapy Program	177
8.4.1	Guidelines for Evaluation: What Are the Key Signs to Look for in Early Disease?	177
8.5	The Maintenance Therapy Appointment: The Basic Protocol	178
8.6	Implant Maintenance	179
8.6.1	Anatomy of a Dental Implant and its Supporting Prosthesis	179
8.6.2	Evaluation of Implant Health	179
8.6.3	Instrumentation of Dental Implants	181
8.6.4	Protocol for Home Care for Patients	183
8.7	Knowing Your Diagnostic Goals	185
8.8	Knowing the Treatment Goal of Periodontal Therapy	186
8.9	Knowing the Psychological Difficulties Associated with the Maintenance Therapy Program	187
8.10	Understanding Anatomic Realities: The Degree of Attachment Loss and the Presence of Pockets	188
8.11	Extending the Vision of Success: Does Maintenance Therapy Work?	190
8.12	The Challenge of Compliance	191
	Further Reading	192
9	Concluding Statement	195
	Further Reading	195
	Appendix A: American Academy of Periodontology Classification of Periodontal Diseases	197
	Appendix B: Antibiotic Prophylaxis Guidelines	201
	Appendix C: Treating Tobacco Use: Pharmacological Therapy	203
	Appendix D: Fagerstrom Test	205
	Appendix E: Sample Patient Brochure Describing the Maintenance Therapy Program	207
	Index	209