Patient Consultation Guide
# Classification of Periodontal and Peri-Implant Diseases

<table>
<thead>
<tr>
<th>Periodontal Health, Gingivitis &amp; Gingival Conditions</th>
<th>Periodontitis</th>
<th>Other Conditions Affecting the Periodontium</th>
<th>Peri-Implant Diseases &amp; Conditions</th>
</tr>
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<tr>
<td>Periodontal Health &amp; Gingival Health</td>
<td>Necrotizing Periodontal Diseases</td>
<td>Systemic Diseases or Conditions affecting periodontal supporting structures</td>
<td>Peri-Implant Health</td>
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<tr>
<td>Gingivitis: Biofilm Induced</td>
<td>Periodontitis as a manifestation of systemic diseases</td>
<td>Periodontal Abscesses &amp; Endodontic-Periodontal Lesions</td>
<td>Peri-Implant Mucositis</td>
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<tr>
<td>Gingival diseases: Non-Biofilm Induced</td>
<td>Periodontitis</td>
<td>Mucogingival Deformities &amp; Conditions</td>
<td>Peri-Implantitis</td>
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<tr>
<td></td>
<td></td>
<td>Traumatic Occlusal Forces</td>
<td>Peri-Implant soft &amp; hard tissue deficiencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tooth &amp; Prostheses-related factors</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from Caton et al. J Periodontal 2018.
Health

Clinical Gingival Health on an Intact Periodontium

Stable Periodontitis Patient

Clinical Characteristics

- BOP <10%
- PD ≤3mm
- Probing Attachment Loss – no
- RBL – no

Clinical Gingival Health on a Reduced Periodontium: Non-Periodontitis Patient (ie. recession, crown lengthening etc.)

- BOP <10%
- PD ≤4mm
- (no site ≥4mm with BOP)
- Probing Attachment Loss – yes
- RBL – yes

Clinical Gingival Health on a Reduced Periodontium: Stable Periodontitis Patient

- BOP <10%
- PD ≤3mm
- Probing Attachment Loss – yes
- RBL – possible
## Gingivitis

### Clinical Characteristics

<table>
<thead>
<tr>
<th>Gingivitis Intact Periodontium</th>
<th>Gingivitis with Reduced Periodontium</th>
<th>Gingivitis with Reduced Periodontium</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stable Periodontitis Patient</strong></td>
<td><strong>BOP ( \geq 10% )</strong>&lt;br&gt;<strong>PD ( 0-3 \text{ mm} )</strong>&lt;br&gt;<strong>CAL – none</strong>&lt;br&gt;<strong>RBL – none</strong></td>
<td><strong>Non-Periodontitis Patient</strong>&lt;br&gt;ie. recession; crown lengthening, etc)</td>
</tr>
<tr>
<td>BOP ( \geq 10% )</td>
<td>BOP ( \geq 10% )</td>
<td>BOP ( \geq 10% )</td>
</tr>
<tr>
<td>PD ( \leq 3\text{ mm} )</td>
<td>PD ( \leq 3\text{ mm} )</td>
<td>PD ( \leq 3\text{ mm} )</td>
</tr>
<tr>
<td>CAL – yes</td>
<td>CAL – yes</td>
<td>CAL – yes</td>
</tr>
<tr>
<td>RBL – yes</td>
<td>RBL – yes</td>
<td>RBL – possible</td>
</tr>
</tbody>
</table>
Periodontitis **Stage I - Grade B**

**Clinical Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP – yes (&gt;10%)</td>
<td>No tooth loss due to periodontitis</td>
</tr>
<tr>
<td>PD ≤ 4 mm</td>
<td>Moderate rate of progression</td>
</tr>
<tr>
<td>CAL 1-2 mm</td>
<td>If Smoker &lt; 10 cigs/day</td>
</tr>
<tr>
<td>RBL &lt; 15% &amp; generally horizontal</td>
<td>If Diabetic HbA1c &lt; 7.0%</td>
</tr>
<tr>
<td>Biofilm – slight - heavy</td>
<td></td>
</tr>
</tbody>
</table>

* Grade is determined by rate of progression
Periodontitis **Stage II - Grade B**

**Clinical Characteristics**

| BOP – yes | No tooth loss due to periodontitis |
| PD ≤ 5 mm | Moderate rate of progression |
| CAL 3-4 mm | If Smoker < 10 cigs/day |
| RBL – 15%-33% & mostly horizontal | If Diabetic HbA1c < 7.0% |
| Biofilm – slight - heavy | |

* Grade is determined by rate of progression
Periodontitis **Stage III - Grade B**

<table>
<thead>
<tr>
<th>Clinical Characteristics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP – yes</td>
<td>Tooth loss due to periodontitis ≤ 4 teeth</td>
</tr>
<tr>
<td>PD ≥ 6 mm</td>
<td>Furcation involvement – Class II or III</td>
</tr>
<tr>
<td>CAL ≥5 mm</td>
<td>Moderate ridge defect</td>
</tr>
<tr>
<td>RBL ≥50% horizontal≥ 3mm vertical</td>
<td>If Smoker &lt; 10 cigs/day</td>
</tr>
<tr>
<td>Biofilm – slight - heavy</td>
<td>If Diabetic HbA1c &lt; 7.0%</td>
</tr>
</tbody>
</table>

* Grade is determined by rate of progression
Periodontitis **Stage IV - Grade B** and **Stage IV - Grade C**

**Stage IV Grade B**

- BOP – yes
- PD ≥ 6 mm
- CAL ≥ 5 mm
- RBL ≥ 50% horizontal
  ≥ 3mm vertical
- Biofilm – slight - heavy
- Tooth loss due to periodontitis ≥ 5 teeth
- Furcation involvement = Class II or III
- Moderate ridge defect
  - If Smoker < 10 cigs/day
  - If Diabetic HbA1c < 7.0%
- Need for complex rehabilitation

**Stage IV Grade C**

- BOP – yes
- PD ≥ 6 mm
- CAL ≥ 5 mm
- RBL ≥ 50% horizontal
  ≥ 3mm vertical
- Biofilm – slight - heavy
- Tooth loss due to periodontitis ≥ 5 teeth
- Furcation involvement = Class II or III
- Moderate ridge defect
- Bone loss exceeds expectations given biofilm
  - If Smoker ≥ 10 cigs/day
  - If Diabetic HbA1c ≥ 7.0%
- Need for complex rehabilitation

* Grade is determined by rate of progression
# Periodontitis Staging

<table>
<thead>
<tr>
<th>Periodontitis</th>
<th>Stage I</th>
<th>Stage II</th>
<th>Stage III</th>
<th>Stage IV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Severity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdental CAL at site of greatest loss</td>
<td>1-2mm</td>
<td>3-4mm</td>
<td>≥5mm</td>
<td>≥5mm</td>
</tr>
<tr>
<td>Radiographic Bone Loss</td>
<td>Coronal third (&lt;15%)</td>
<td>Coronal third (15%-33%)</td>
<td>Extending to mid-third of root and beyond</td>
<td>Extending to mid-third of root and beyond</td>
</tr>
<tr>
<td>Tooth Loss</td>
<td>No tooth loss due to Periodontitis</td>
<td>No tooth loss due to Periodontitis</td>
<td>Tooth loss due to Periodontitis of ≤4 teeth</td>
<td>Tooth loss due to Periodontitis of ≥5 teeth</td>
</tr>
</tbody>
</table>

| **Complexity** |         |          |           |          |
| Local | • Maximum Probing Depth ≤ 4mm | • Maximum Probing Depth ≤ 5mm | In addition to Stage II complexity: | In addition to Stage III complexity: |
| | • Mostly horizontal bone loss | • Mostly horizontal bone loss | • Probing depth ≥ 6mm | Need for complex rehabilitation due to: |
| | | | • Vertical bone loss ≥3mm | • Masticatory dysfunction |
| | | | • Furcation involvement (Class II or III) | • Secondary occlusal trauma (tooth mobility degree ≥2) |
| | | | • Moderate ridge defect | • Severe ridge defect |
| | | | | • Bite collapse, drifting, flaring |
| | | | | • Less than 20 remaining teeth (10 opposing pairs) |

| Extent and distribution | For each stage, describe extent as localized (<30% teeth involved), generalized, or molar/incisor pattern |

Adapted from Tonetti et al. J Periodontal. 2018;89(Supp 1):S159-S172)
## Periodontitis Grading

<table>
<thead>
<tr>
<th>Periodontitis</th>
<th>Grade A</th>
<th>Grade B</th>
<th>Grade C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Criteria</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Direct Evidence of Progression</strong></td>
<td>Longitudinal data (Radiographic bone loss or CAL)</td>
<td>Evidence of no RBL or CAL loss over 5 years</td>
<td>≤2mm over 5 years</td>
</tr>
<tr>
<td><strong>Indirect Evidence of Progression</strong></td>
<td>% Bone Loss/age</td>
<td>&lt;0.25</td>
<td>0.25 - 1.0</td>
</tr>
<tr>
<td>Case Phenotype</td>
<td>Heavy biofilm deposits with low levels of destruction</td>
<td>Destruction commensurate with biofilm deposits</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Destruction exceeds expectation given biofilm deposits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Specific clinical patterns suggestive of periods of rapid progression and/or early-onset disease (eg. molar/incisor pattern; lack of expected response to standard bacterial control therapies)</td>
</tr>
</tbody>
</table>

### Grade Modifiers

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Smoking</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smoking</strong></td>
<td>Non-smoker</td>
<td>Smoker &lt;10 cigarettes/day</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td>Normoglycemic/no diagnosis of diabetes</td>
<td>HbA1c&lt;7.0%</td>
</tr>
</tbody>
</table>

Necrotizing Periodontal Diseases **Necrotizing Gingivitis (NG)**

**Clinical Characteristics**
- BOP – profuse & generalized
- PD ≤ 3 mm
- RBL – none
- Biofilm – moderate - heavy
- Inflammation/necrotic tissue
- Pseudomembrane
- Gingival recession
- Necrosis
- Loss of interproximal papillae
- Pain/fever - variable

**Risk Factors**
- Inadequate oral hygiene
- Smoking
- Psychological stress
- Nutritional deficiency
- Immunosuppression
- Sleep deprivation
Peri-implant Mucositis

**Clinical Characteristics**

- BOP – yes
- PD – increase
- RBL – no
- Visual inflammation – yes
- Biofilm – yes
- Mobility – no
## Peri-implantitis

<table>
<thead>
<tr>
<th>Clinical Characteristics</th>
<th>Risk Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP &amp;/or suppuration – yes</td>
<td>History of severe periodontitis</td>
</tr>
<tr>
<td>PD – increase/correlated to bone loss</td>
<td>Poor biofilm control</td>
</tr>
<tr>
<td>RBL – yes</td>
<td>No regular maintenance care</td>
</tr>
<tr>
<td>Biofilm – yes</td>
<td></td>
</tr>
</tbody>
</table>
The Oral Microbiome: More than Meets the Eye

- Imbalanced bacteria
- Releases toxins
- Activates cells that degrade bone
- Amplifies disease
- Triggers immune response

**Symbiosis**
- Resistance to colonization
- Anti-inflammatory factors
- Support host defense
- Maintains a healthy digestive tract
- Antioxidant activity
- Regulates cardiovascular system
- Host-microbiome

**Dysbiosis**
- Diabetes
- Smoking
- Genetics
- Poor oral hygiene
- Poor diet
- Antibiotics/antimicrobial agents
- Salivary factors
- Immune factors

**Factors**
- Poor oral hygiene
- Genetics
- Poor diet
- Smoking
- Antibiotics/antimicrobial agents
- Salivary factors
- Immune factors
Primary and Permanent Dentition

**Primary Eruption Dates**
- Central incisor: 8-12 mos
- Lateral incisors: 9-11 mos
- Canine: 16-22 mos
- 1st Molar: 13-19 mos
- 2nd Molar: 25-33 mos

**Permanent Eruption Dates**
- Central incisor: 7-8 yrs
- Lateral incisor: 8-9 yrs
- Canine: 11-12 yrs
- 1st Premolar: 10-11 yrs
- 2nd Premolar: 10-12 yrs
- 1st Molar: 6-7 yrs
- 2nd Molar: 11-13 yrs
- 3rd Molar: 17-21 yrs
- 1st Premolar: 10-12 yrs
- Canine: 9-10 yrs
- Lateral incisor: 8-9 yrs
- Central incisor: 7-8 yrs
Dental Decay

Location of caries:

- Sound
- Initial
- Moderate
- Advanced

Location:
- Pit & fissure
- Interproximal / Smooth surface
- Cervical / Root
**Tips to Prevent Dental Decay**

- Foods that cling to your teeth
- Frequent snacking or sipping
- Bedtime infant feeding
- Inadequate plaque removal
- Dry Mouth (mouth breather)
- Not getting enough fluoride
- Heartburn/GERD
- Eating Disorders
- Dexterity (young and old)

**Sugar** + **Bacteria** forms **Acid** + **Healthy tooth** forms **Decay**

**Risk Factors**

**Fluoride**

**Saliva**

**Sealants:**

Sugar + Bacteria forms Acid + Healthy tooth forms Decay
Restorative Options

- **Filling**
- **Crown**
- **Bridge**
- **Implant**
Cumulative General Guidelines for Management

Record Score for most SEVERE surface per sextant

Erosive Tooth Wear

Acid softened enamel is more susceptible to wear from physical abrasion and attrition.

Erosion is irreversible.

Teeth feature:
Healthy: Natural contours with slight grooves & imperfections
Smooth & more translucent
Dull & concave areas begin to form
Yellow as underlying dentin begins to show

Erosive Tooth Wear

No ETW: 0-2
Initial loss of surface texture
High: ≥14
Hard tissue loss involving ≥50% of the surface area

Low: 3-8
Distinct defect; hard tissue loss involving <50% of the surface area

Medium: 9-13
Hard tissue loss involving <50% of the surface area

• Oral hygiene, dietary assessment
• Routine maintenance
• Fluoride measures
• Avoid restorations
• Repeat at 6-12 month intervals

• Oral hygiene, dietary assessment
• Repeat at 2-year intervals

• Routine maintenance and observation
• Repeat at 3-year intervals

• Oral hygiene, dietary assessment
• Repeat at 6-12 month intervals
• Consider restorations

• Routine maintenance and observation
• Repeat at 3-year intervals
Prevention and Management of Erosive Tooth Wear

Stannous Fluoride is recognized as being more effective than Sodium Fluoride in the prevention of dental erosion.

Use a straw for acidic beverages
Chew sugarless gum
Dairy after acidic foods
Drink water

Brush with a protective toothpaste

<table>
<thead>
<tr>
<th>Acid Scale Danger Zones</th>
<th>pH (acid scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lemon juice</td>
<td>2</td>
</tr>
<tr>
<td>Cola</td>
<td>2.6</td>
</tr>
<tr>
<td>Orange juice</td>
<td>3.3</td>
</tr>
<tr>
<td>Beer</td>
<td>3.7-4.2</td>
</tr>
<tr>
<td>Banana</td>
<td>5</td>
</tr>
<tr>
<td>Avocado</td>
<td>6.5</td>
</tr>
<tr>
<td>Water</td>
<td>7</td>
</tr>
</tbody>
</table>
## Stannous Fluoride

<table>
<thead>
<tr>
<th>Therapeutic Benefit</th>
<th>Active Ingredient</th>
<th>Mechanism of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticaries</td>
<td><strong>Stannous fluoride</strong>&lt;br&gt;Sodium fluoride&lt;br&gt;Sodium mono-fluorophosphate&lt;br&gt;Amine fluoride</td>
<td>Enhances Remineralization&lt;br&gt;Inhibits Demineralization</td>
</tr>
<tr>
<td>Reduces plaque</td>
<td><strong>Stannous fluoride</strong>&lt;br&gt;Chlorhexidine&lt;br&gt;Cetylpyridinium chloride, Essential oils&lt;br&gt;Sodium Bicarbonate</td>
<td>Bactericidal&lt;br&gt;Bacteriostatic</td>
</tr>
<tr>
<td>Reduces erosion</td>
<td><strong>Stannous fluoride</strong>&lt;br&gt;Sodium fluoride</td>
<td>Sodium Fluoride protects to pH &lt;5.5 while Stannous protects against dietary acids in the enamel danger zone (pH &lt;4.5)</td>
</tr>
<tr>
<td>Reduces sensitivity</td>
<td><strong>Stannous fluoride</strong> / chloride&lt;br&gt;Potassium nitrate / chloride&lt;br&gt;Strontium chloride / acetate&lt;br&gt;Arginine plus calcium</td>
<td>Causes Movement&lt;br&gt;Stimulates Nerve Receptor&lt;br&gt;Pain Signal Transmission</td>
</tr>
<tr>
<td>Reduces halitosis</td>
<td><strong>Stannous fluoride</strong> / chloride&lt;br&gt;Essential Oils&lt;br&gt;Chlorine Dioxide</td>
<td>Enhances Remineralization&lt;br&gt;Inhibits Demineralization</td>
</tr>
</tbody>
</table>

### Active Ingredients
- **Humectants** 20-60%
- **Water** 20-40%
- **Abrasives** 20-40%
- **Binder** 10-50%
- **Buffer** .3-2%
- **Surfactants** .5-2%
- **Flavors & sweetener** <1%
- **Colors & preservatives** 1-2%
- **Active ingredients** 2.5-2%
- **Essential Oils** 2-8%
- **Active ingredients** .2-10%
- **Stannous Fluoride** 1-2%

*Patients are 3.7x more likely to transition to gingival health using a stabilized, bioavailable Stannous Fluoride toothpaste versus sodium fluoride or MFP1.*

Brushing Instructions

Power

Manual
Interdental Cleaning

Flossing

Other methods

Floss holder  Power interdental  Irrigator  Interdental brush  Tongue cleaner
Decalcification (or weakening) of enamel is caused by plaque around brackets and wires.

Tips for Orthodontic Patients

Improve Your Smile by Removing Plaque Effectively
Denture(s) should be cleaned daily to remove food and debris with a soft brush, warm water and a denture cleaner.

**Denture Care**

**Adhesives**

**Biggest advantages for denture wearers:**
- Strong long-lasting hold
- Movement reductions
- Food seal

**Fixodent**

NET WT 0.6 OZ (17 g)  Denture Adhesive Cream

Full Denture

Partial Denture
KEY CONTENT

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PRODUCT INFORMATION AND SAMPLING

EDUCATIONAL RESOURCES FOR KIDS

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FREE PATIENT MATERIALS