Preventive Measures
Oral Health Risk Assessment and Management

Taking Preventive Measures
to Protect Tomorrow’s Smiles
Establishing a formal prevention program can help improve your standard of care

You know that achieving and maintaining good oral health takes a coordinated effort between you and your patient. Increasingly, dental offices have been instituting more formal risk assessment programs to:

- assign patients into recognized risk categories
- identify treatment options and therapies to achieve and maintain proper oral health

Patients appreciate a comprehensive approach

Establishing a formal risk assessment program in the office can be very beneficial. However, dental professionals frequently tell us that the lack of patient understanding, acceptance of treatment options and compliance with maintenance therapies are the biggest obstacles they face in helping patients achieve or maintain good oral health. Practices that have been the most successful often tell us that they began to see better results when they adjusted their approach to preventive care with their patients. These offices:

- tell patients that caries, gingivitis and periodontitis are diseases that can be prevented and treated
- discuss the causes that contribute to these diseases to improve patient understanding
- remind patients with existing restorations that proper oral hygiene is important for avoiding secondary decay
- advise patients that the success of treatment is greatly dependent on their involvement and compliance with treatment recommendations
- provide home care medications in the office to reinforce that these therapies are necessary

Achieving or maintaining a healthy smile requires a comprehensive program of professional treatment and patient compliance with home care therapy.
Assessing risk and identifying clinical protocols

Determining whether a patient is at low, medium or high risk for caries or periodontal diseases is the first step in implementing a formal risk assessment program. It begins by identifying the various environmental and clinical factors that can affect their oral health.

Level of fluoride exposure, dietary habits, medical conditions, oral hygiene habits and existing dental health status are some of the key criteria in caries risk assessment.

Tobacco use, drug-induced gingival conditions, diabetes, chronic inflammation, and exposed root surfaces are a few of the key criteria in determining periodontal disease risk.

Once the patient risk level is determined, protocols can be implemented to achieve or maintain optimal oral health. In the last decade there have been a number of efforts by various professional groups to establish guidelines for oral health risk assessment and management of caries and periodontal diseases.

This booklet is intended to provide an overview of the currently accepted guidelines and is not intended to replace clinical judgment regarding individual patient circumstances.

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Assessing Risk and Managing Caries

The American Dental Association (ADA) has published guidelines for assessing caries and managing patients at various risk levels. A panel of national experts also published a set of guidelines in the Journal of the California Dental Association referred to as Caries Management by Risk Assessment (CAMBRA). The following has been summarized from these guidelines to provide you with a brief overview for assessing caries risk and establishing treatment plans.

Environmental Risk Factors

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<thead>
<tr>
<th>Low Risk</th>
<th>Moderate Risk</th>
<th>High Risk</th>
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| • Adequate fluoride exposure (supplements, water, dentifrice, etc.)  
• Primarily consumes sugary or starchy foods/drinks only at mealtimes  
• No family history of carious lesions in past 24 months | Patients who exhibit any of the following conditions may be considered at Moderate Risk. Multiple conditions increase risk.  
• No fluoride exposure (supplements, water, dentifrice, etc.)  
• Family history of carious lesions in past 7-23 months  
• Has some special health care needs that inhibit adequate oral home care  
  (in patients over 14 years of age)  
• Has eating disorder  
• Uses tobacco products  
• Takes medication that reduces salivary flow  
• Abuses drugs or alcohol | Patients who exhibit multiple Moderate Risk factors may be considered at High Risk. Additionally, any one of the following conditions may place the patient at high risk.  
• Frequently consumes sugary or starchy foods/drinks between meals  
• Had carious lesions in past 6 months  
• Has some special health care needs that inhibit adequate oral home care  
  (in patients 6-14 years of age)  
• Received chemo/radiation therapy |

Visit [www.ada.org](http://www.ada.org) and [www.cdafoundation.org/journal](http://www.cdafoundation.org/journal) to review the full reports and various tools available from these organizations.
**Clinical Risk Factors**

<table>
<thead>
<tr>
<th>Low Risk</th>
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<tr>
<td>• No carious lesions or restorations in past 36 months</td>
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<td>• No visible plaque</td>
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<td>• No unusual tooth morphology that compromises oral hygiene</td>
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<tr>
<td>• No interproximal restorations</td>
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<tr>
<td>• No exposed roots</td>
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<tr>
<td>• No open margins or bad contacts in existing restorations</td>
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<tr>
<td>• No orthodontic appliances</td>
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<td>• No dry mouth</td>
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<th>Moderate Risk</th>
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<tr>
<td>Patients who exhibit any of the following conditions may be considered at Moderate Risk. Multiple conditions increase risk.</td>
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<tr>
<td>• One or two carious lesions or restorations in past 36 months</td>
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<tr>
<td>• Visible plaque</td>
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<tr>
<td>• Unusual tooth morphology that compromises oral hygiene</td>
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<tr>
<td>• Interproximal restorations</td>
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<td>• Exposed roots</td>
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<td>• Orthodontic appliances</td>
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<th>High Risk</th>
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<tr>
<td>Patients who exhibit multiple Moderate Risk factors may be considered at High Risk. Additionally, any one of the following conditions may place the patient at high risk.</td>
</tr>
<tr>
<td>• Three or more carious lesions, restorations or missing teeth in past 36 months</td>
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<tr>
<td>• Severe dry mouth</td>
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Patients with existing restorations may be at high risk for secondary caries.
After determining the caries risk level for individual patients, the guidelines established by the ADA and CAMBRA Group can assist you in establishing the appropriate protocols to achieve or maintain optimal oral health. In addition, determine if the patient has dentinal hypersensitivity. This will enable you to provide therapy and relieve the condition.

**Low Risk Patients**

Oral health is well controlled in this group. Encourage patients to maintain current lifestyle and oral hygiene habits. Offer suggestions for improvement where applicable, such as more frequent flossing or eating less frequently.

- Schedule recall appointments every 6-12 months.
- Bitewing radiographs should be taken every 24-36 months (18-24 months for age 2-5 years).
- Sealants are optional as well as products containing xylitol or calcium phosphate.
- A saliva test, use of pH modifying products and antimicrobial products are not required for these patients but may be warranted based on clinical judgment.
- The use of OTC fluoride products twice daily is adequate to maintain the patients’ oral health, however, with individual cases, some modifications may be needed such as varnish for exposed root surfaces.

**Moderate Risk Patients**

More effort is required to maintain oral health with patients in this category. The patients may need instruction on proper oral hygiene habits.

- Schedule recall appointments every 4-6 months.
- Bitewing radiographs should be taken every 18-24 months (12-18 months for age 2-5 years).
- In office preventive treatments should include a topical fluoride application at every recall. One to two applications at the beginning of therapy may be considered.
- Sealants should be applied to surfaces that are at risk in children and are optional for adults. Other coatings/barriers may also be applied (e.g. resin modified glass ionomers).
- A saliva test may be considered if there is a suspicion of high bacterial challenge or as a baseline for new patients.
- Restore any cavitated lesions.
• Direct patients to use a fluoride rinse once per day after brushing in addition to the use of OTC toothpaste twice daily.
• Other antimicrobials, gels or dentifrices containing calcium phosphate, mints or gum containing xylitol and pH modifying products are optional. These therapies should be considered if a high bacterial challenge is identified, excessive root exposure or sensitivity is present or saliva flow is inadequate.

High Risk Patients

This group of patients present the biggest challenge for maintaining good oral health. They are at high risk for future decay. They may not have good home hygiene habits and can benefit from instruction on proper home care. Compliance with home care therapies may be an issue, making procedures performed in office become much more important.
• Schedule recall appointments every 3-4 months.
• Bitewing radiographs should be taken every 6-18 months (6-12 months for age 2-5 years) or until no cavitated lesions are present.
• In office preventive treatments should include a topical fluoride application at every recall. One to three applications at the beginning of therapy can be considered.
• Sealants should be applied to surfaces that are at risk in children and are optional for adults. Other coatings/barriers may also be applied (e.g. resin modified glass ionomers).
• A saliva test and bacterial culture should be performed initially and at every recall appointment to assess treatment efficacy and patient compliance.
• Direct patients to brush with a 1.1% NaF dentifrice twice daily in place of OTC fluoride dentifrice.*
• Direct patients to use 10ml of chlorhexidine gluconate 0.12% rinse for one minute daily, one week per month.*
• A 0.2% NaF rinse once daily or a 0.05% NaF rinse twice daily can be considered.
• Gels or dentifrices containing calcium phosphate, mints or gum containing xylitol and pH modifying products are optional. These therapies should be considered if a high bacterial challenge is identified, excessive root exposure or sensitivity is present or saliva flow is inadequate.
• Restore any cavitated lesions.

* Please see Full Prescribing Information.
Assessing Risk and Managing Periodontal Disease

Numerous experts have published recommendations for assessing risk and managing periodontal disease. The goal of a periodontal therapy and maintenance program is to preserve the dentition, while maintaining health, comfort, esthetics and function for the patient.¹ No one treatment can provide the single best outcome, so several different options may be chosen for different cases or time periods in treatment plans.¹

In addition to periodontal assessment, ask the patient if they have tooth sensitivity. If so, determine if the source is dentinal hypersensitivity and provide the appropriate therapy.

Get your patients involved

An interactive risk assessment test developed by the American Academy of Periodontology (AAP) is available to the public at www.perio.org/consumer/4a.html.

This credible, third party assessment tool can help:

- educate your patients
- provide them with an initial, independent assessment of their risk level for periodontal disease
- convince patients to follow your recommended treatment plan

More than 75 percent of Americans over 35 have some form of gum disease.

Source: FDA Consumer Magazine
May-June 2002

Risk Factors

A November 2006 Journal of the American Dental Association supplement article on periodontal disease noted that specific periodontal pathogens, tobacco use and diabetes are primary factors that increase the risk of periodontal disease. In addition, the author cited numerous secondary and tertiary risk factors for periodontitis (see table below).

| Behavioral Risk Factors | • Tobacco use and cigarette smoking*  
| | • Patient compliance (oral hygiene practice and regular dental visits)** |
| Local Risk Factors | • Faulty dental restorations**  
| | • Untreated dental disease**  
| | • Dental anatomy and malocclusion and furcations*** |
| Microbial Risk Factors | • Specific periodontal pathogens*  
| | • Pathogenic potential of the biofilm**  
| | • Total microbial burden** |
| Systemic Risk Factors | • Diabetis mellitus*  
| | • Genetic risk factors (genes controlling proinflammatory cytokines)**  
| | • Sex (male), race/ethnicity (African-American)**  
| | • Osteoporosis***  
| | • HIV infection***  
| | • Psychological factors*** |

* Primary risk factor (strong relationship, supported by association, prospective cohort and intervention studies)  
** Secondary risk factor (moderate relationship, supported by association studies)  
*** Tertiary risk factor (limited supporting data)
At-Risk Patients

The guidelines below can assist you in developing appropriate protocols to achieve optimal results for at-risk patients. Determining actual treatment plans, including whether a patient should be referred to a specialist, is dependent on your clinical judgment. We encourage you to visit www.perio.org to review the complete guidelines developed by the American Academy of Periodontology.

| Scheduling | • For patients with a history of periodontitis, visits at 3 month intervals may be required during the initial phase of therapy.  
• Based on evaluation of clinical findings and assessment of disease status, frequency may remain the same, be modified, or the patient may return to mechanical, chemical, surgical, and/or non-surgical treatment.  
• For most patients with a history of periodontitis, studies suggest that all visits be scheduled at intervals of less than 6 months.  
• After the initial phase of periodontal therapy, semiannual visits may be adequate for patients presenting with recurrent gingivitis. |
|---|---|
| Treatment | • Removal of subgingival and supragingival plaque and calculus.  
• Behavioral modification:  
  • Oral hygiene reinstruction  
  • Adherence to suggested recall visits  
  • Counseling on control of risk factors (e.g., smoking, stress)  
• Selective scaling or root planing, if indicated  
• Occlusal adjustment, if indicated  
• Use of systemic antibiotics, local antimicrobial agents, or irrigation procedures, as necessary  
• Root desensitization, if indicated  
• Surgical therapy (or discontinuation of periodontal maintenance and treatment of recurrent disease), if indicated |

Look to 3M ESPE for help

Staying abreast of the latest developments in risk assessment and treatment protocols can be daunting. Our website includes links to all of the information used to provide the guidelines included in this booklet. We also offer numerous products to help implement your caries and periodontal disease treatment plans, many of which are highlighted below. Please visit www.3MESPE.com/preventivecare regularly for updates.

### Low Risk or Routine Patient Care

<table>
<thead>
<tr>
<th>Prophy</th>
<th>Pit and Fissure Sealant</th>
<th>Dental Floss</th>
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<tr>
<td>Clinpro™ Prophy Paste&lt;br&gt;Prophy Paste with Fluoride</td>
<td>Clinpro™ Prophy Angles&lt;br&gt;Disposable Prophy Angles</td>
<td>Clinpro™ Sealant&lt;br&gt;Pit &amp; Fissure Sealant</td>
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### Moderate to High Risk Patient Care

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<tr>
<th>In-Office</th>
<th>Home Use</th>
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<tr>
<td>Vanish™&lt;br&gt;5% Sodium Fluoride White Varnish</td>
<td>Vanish™ XT&lt;br&gt;Extended Contact Varnish</td>
</tr>
<tr>
<td>Clinpro™ 5000&lt;br&gt;1.1% Sodium Anti-Cavity Fluoride Toothpaste</td>
<td>Just for Kids™&lt;br&gt;0.4% Stannous Fluoride Brush-On Gel</td>
</tr>
<tr>
<td>TheraMints™ &amp; TheraGum™&lt;br&gt;100% Xylitol Sweetened</td>
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### Peridontal Patient Care

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<th>Home Use</th>
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<tbody>
<tr>
<td>Peridex™&lt;br&gt;Chlorhexidine Gluconate&lt;br&gt;0.12% Oral Rinse</td>
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<tr>
<td>PerioMed™&lt;br&gt;0.63% Stannous Fluoride Oral Rinse</td>
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Customer Care Center: 1-800-634-2249  
www.3MESPE.com
Additional information about caries and periodontal disease risk assessment and management can be obtained at the following web sites:

- The ADA caries risk assessment forms can be found at http://www.ada.org/2752.aspx?currentTab=2.
- CAMBRA guidelines published in the CDA Journal can be found at www.cdafoundation.org/journal.
- An interactive risk assessment test developed by the American Academy of Periodontology (AAP) is available to the public at www.perio.org/consumer/4a.html.