A smile is one of the most primitive forms of human communication, and it is not surprising that an esthetic one is the major ambition of patients. Face-lip, lip-tooth, and lip-gingiva relations all determine the appeal of a smile. The amount of tooth structure exposed during smiling depends on a number of factors: the degree of contraction of the muscles of facial expression, soft tissue level, skeletal characteristics, and the design of restorations, tooth shape, or tooth wear. Most people fail to expose much of the gingival tissue during smiling but those with a short upper lip, hypermobile lips, or large alveolar processes often do. Excessive gingival display occurs in patients with a moderately long upper lip only in the presence of unusual maxillary anterior supra-eruption or skeletal hyperplasia.

THE PERFECT SMILE
Three general classifications of smile lines exist, based on the height of the upper lip relative to the maxillary anterior central incisors: high, average, and low. A high smile exposes the total length of the maxillary anterior teeth and a contiguous band of gingiva. An average smile exhibits 75% to 100% of the teeth and the interproximal gingiva only, while a low smile displays less than 75% of the anterior teeth. Roughly 70% of people have an average smile, 20% have a low smile, and 10% have a high smile. Men present more frequently with low smile lines, though perhaps this mirrors conformity to masculine archetypes.

THE PERFECT GUMS
The clinician cannot underestimate the magnitude of the periodontal drape in the look of a smile. The gingiva frames the teeth, and its position, shape, and color establishes an esthetic facade. Ideally, the gingival margin of the maxillary lateral incisors lies 1 mm to 2 mm incisal to that of the central incisors and canines. The height of contour of the gingival margin of maxillary central incisors and canines occurs at the distal line angle; alternatively, the lateral incisor’s height of contour exists at the mesiodistal center.

Tissue thickness and tooth shape govern the degree of gingival scallop. Thick tissue and square-shaped teeth support a flat gingival contour (more masculine), while thin tissue and triangular teeth favor a scalloped margin (more feminine).

Periodontal Plastic Surgery I:
Root Coverage
Michael Sonick, DMD; and Debby Hwang, DMD

Figure 1: Factors That Cause Recession

- High frenum or muscle attachment
- Thin gingiva and bone
  - Prominent or malpositioned teeth
  - Orthodontic movement
- Subgingival restorations
- Periodontal disease
- Abrasion
  - Toothbrush
- Erosion
- Periodontal therapy
  - Scaling and root planing in shallow pockets
  - Resective surgery
- Snuff use
- Foreign body impaction
- Peri- and intraoral piercings

Table 1: Miller’s Classification of Marginal Tissue Recession

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>CRITERIA</th>
<th>ANTICIPATED ROOT COVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Marginal tissue recession which does not extend to the MGJ. There is no periodontal loss (bone or soft tissue) in the interdental area.</td>
<td>100%</td>
</tr>
<tr>
<td>II</td>
<td>Marginal tissue recession which extends to or beyond the MGJ. There is no periodontal loss (bone or soft tissue) in the interdental area.</td>
<td>100%</td>
</tr>
<tr>
<td>III</td>
<td>Marginal tissue recession which extends to or beyond the MGJ. Bone or soft tissue loss in the interdental area is present or there is malpositioning of the teeth.</td>
<td>Partial</td>
</tr>
<tr>
<td>IV</td>
<td>Marginal tissue recession which extends to or beyond the MGJ. The bone or soft tissue loss in the interdental area and/or malpositioning is severe.</td>
<td>Cannot be anticipated, though is occasionally obtained</td>
</tr>
</tbody>
</table>