

## Create realistic objectives

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The first step in planning orthodontic therapy is to establish treatment objectives. It is impossible to achieve the correct end result if the appropriate goals or objectives have not been identified before treatment. In adolescent patients with complete dentitions, orthodontic treatment objectives tend to be idealistic. After all, if a young patient has an intact dentition without restorations, ideal esthetic and occlusal treatment goals should be attainable. Some orthodontists are trapped into applying these same idealistic treatment objectives to adult patients with missing or abraded teeth, old restorations, or other complications. Idealistic treatment objectives might not be appropriate for some adults. It might be more appropriate to create realistic, not idealistic, treatment objectives. Realistic treatment objectives generally fall into 4 categories: economically realistic, periodontally realistic, restoratively realistic, and occlusally realistic.

If an adult orthodontic patient were missing several teeth, the edentulous spaces created during treatment would require restoration after removal of the appliances. There could be several restorative alternatives for replacing the missing teeth. The cost of these restorative treatment plans could differ widely. If the orthodontist positions the teeth incorrectly, requiring a restorative plan that is unaffordable, the patient might not complete the treatment. Therefore, it is mandatory that orthodontists establish a treatment plan that is economically realistic or affordable for each patient.

A common treatment objective in children is to align the marginal ridges of adjacent molars and premolars to produce a uniform vertical relationship of the maxillary and mandibular posterior teeth. In a nonabraded, periodontally healthy adolescent dentition, aligning the marginal ridges not only helps to establish even contact of the posterior teeth when they are brought into occlusion, but also creates a level interproximal bony relationship between adjacent teeth. However, in an adult with interproximal bone loss and uneven wear of the molars and premolars, the marginal ridges are poor guides for positioning the posterior teeth. In these patients, the orthodontist's role is to establish periodontally realistic objectives and to level the bone

orthodontically. This could involve intrusion or extrusion of molars and premolars, and could require equilibration and reshaping of these teeth to maintain occlusal contacts.

An ideal posterior occlusion is usually achievable in an adolescent with no missing teeth. However, many adults have missing teeth. For them, it is important to establish tooth positions that are restoratively realistic. For example, if the patient will require extensive restorations after orthodontic treatment, the restorative dentist might suggest altering the occlusion to facilitate restoration of the teeth. The orthodontist must be aware of these potential alterations before bracket placement to achieve restoratively realistic tooth positions for that patient.

When planning treatment for an adolescent, it is typical for the orthodontist to establish idealistic occlusal objectives based on the concepts of Edward H. Angle. Is this appropriate? When diagnosing an adolescent's malocclusion, unfortunately, the orthodontist is missing 2 critically important pieces of information. First, because of the young age, there is typically little information about the occlusal history. Second, the orthodontist cannot predict the future oral habits or dental problems that a young patient will encounter. Therefore, it is probably safer to create an idealistic Angle Class I occlusion.

However, when planning treatment for an adult, an orthodontist might overlook the most valuable piece of background information—the patient's dental history. Does the patient have parafunctional occlusal habits, evidence of temporomandibular disorders, cracked teeth or restorations, wear facets, abraded incisors, or other signs and symptoms that would suggest that the treatment plan should alter the existing posterior occlusion? For example, if an adult patient has functioned successfully with an existing malocclusion and the future restorative or periodontal care does not require correction of that malocclusion, it might be more appropriate not to create an idealistic Class I occlusion. Each adult's dental history helps the orthodontist to establish occlusally realistic treatment objectives. So, when you're planning treatment for an adult, create realistic objectives.

