## Talking with Patients

# Occlusion (Part 2 of 2)

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In the previous *Journal of Esthetic and Restorative Dentistry*'s Talking with Patients, we defined occlusion and malocclusion and discussed when and why malocclusion is a concern. In this issue we will discuss the diagnosis and treatment of malocclusions.

#### HOW IS A PARTICULAR MALOCCLUSION IDENTIFIED AND TREATED?

Malocclusions can be diagnosed during careful, routine dental examinations. The tendency to develop an abnormal occlusion can be detected early in life. Children should be examined by their dentist on a regular basis. Early diagnosis and preventive therapy may result in the need for less treatment later in life. The dental examination may include making replicas of the teeth that are used for more in-depth study of the occlusion. Patients that develop excessive muscle tension, jaw joint problems, destruction of tooth biting surfaces, loose teeth, or combinations of these require careful analysis of their occlusion. Dentists will often use a device generally called a "bite guard" to assist in this analysis. The bite guard may also be used to help slow ongoing damage of the occlusion. The general dentist, upon diagnosis of a malocclusion, will

assess the potential level of treatment required and recommend treatment or may refer to a pediatric dentist, orthodontist, or an oral/maxillofacial surgeon for evaluation and treatment.

Treatment of malocclusion will be dictated by the particular problem the patient is experiencing. Treatments range from relatively simple adjustment of the bite (by selective and precise grinding of premature or improper tooth-to-tooth contacts) to moving the teeth with braces to more ideal positions. Malocclusion may also require replacement of missing teeth or tooth extractions to adjust for better alignment of the teeth into the dental arch, and, in more severe cases, orthognatic surgery to correct jaw abnormalities.

We will expand on common malocclusion treatments:

1. When dentists observe areas that have a greatly increased

tendency for plaque accumulation that may result in decay or inflamed gums, moving teeth into normal occlusion may help reduce the potential for tooth or gum problems. Creation of a stable occlusion will distribute the biting pressures more evenly on the teeth and that may help prevent gum problems

- 2. Correcting arch width mismatches (cross bites) may foster a return to normal jaw growth and proper alignment of the upper and lower teeth. Dentists are able to expand a narrow upper arch in a growing child. Adults that require arch expansion may require surgery
- Frequently the crowding of teeth is due to a mismatch between the top and bottom teeth, not enough arch room for the teeth, or a combination of both. At times the dentist may be able to realign the teeth to eliminate crowding. In some cases it is necessary to remove

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some teeth to allow for proper arch alignment and correction of the occlusion

- 4. During examination the dentist may find that the overall position of one or both jaws will not allow for healthy occlusion and facial balance to occur. Repositioning of the upper and/or lower jaw(s) usually requires surgical intervention and is accomplished in concert with elimination of any crowding and establishment of correct occlusion
- Tooth deterioration and loss may result in a need for reconstruction of the proper shape and size of teeth. The dentist

will choose filling or prosthetic materials based on the cause and amount of destruction as well as the relative loss of proper occlusion. The ultimate goal of this type of corrective treatment is to reestablish normal occlusion

### SUMMARY AND CONCLUSIONS

Occlusion refers to the fit of the upper and lower teeth and arches. The jaw joint position is influenced by the occlusion. Malocclusion may negatively impact the smile and the ability to chew. The longterm health and stability of the teeth, gums, and jaws may require correction of some malocclusions. Regular dental examinations may allow early recognition, initiation of corrective steps, and prevention of more severe malocclusions and associated dental problems. The complex fit of the upper and lower teeth and jaws requires careful attention to detail during both examination and, when necessary to correct malocclusion, dental treatment.

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