

# 6 Orthodontic Assessments

that **every** general dentist should do at each patient exam



**PROGRESSIVE**  
ORTHODONTIC SEMINARS

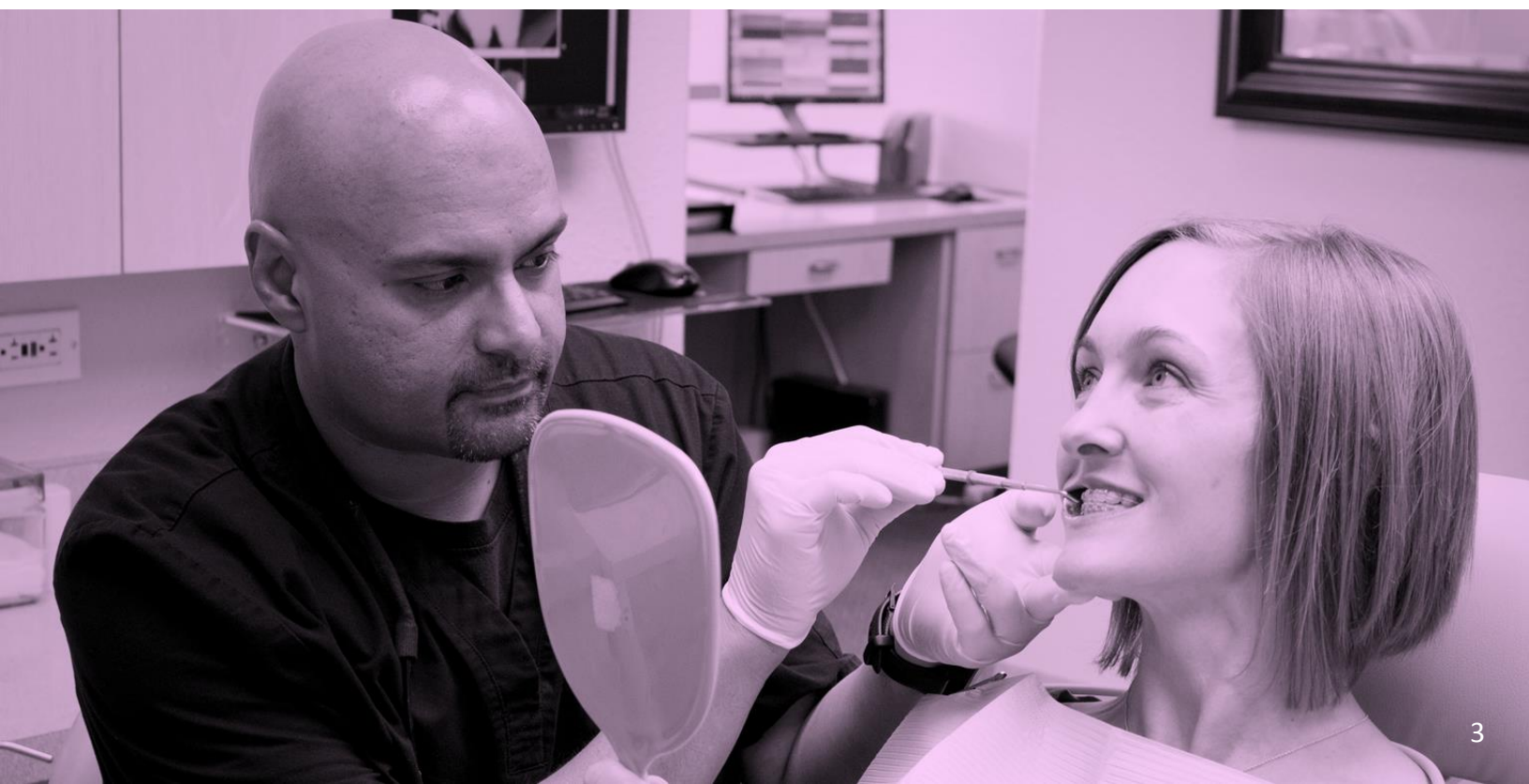
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# Why orthodontic assessments?

As a general dentist, it is important to perform a complete orthodontic evaluation at each patient examination. Whether or not you choose to practice orthodontics, by simply considering your patients' orthodontic needs, you are sure to provide a more successful comprehensive treatment plan.

This eBook will explain 6 orthodontic assessments that you can immediately incorporate into your examinations. These assessments should be performed together as one complete orthodontic evaluation to ensure that you have thoroughly considered your patient's orthodontic condition.



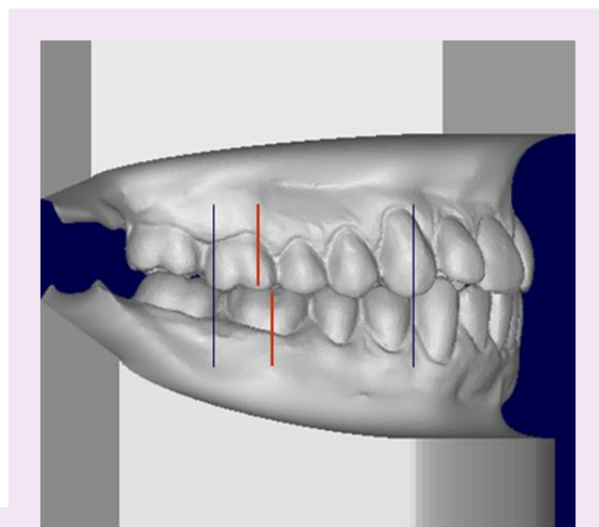
# 1 Classify the Occlusion

Every dentist should analyze each of their patients' bites before starting any treatment. Understanding your patients' occlusion is important to the success of their dental treatment and health. Improper occlusion affects how the teeth interdigitate and can increase restorative complications, create unpleasant facial esthetics, and cause excessive tooth wear.

During your exam, look at your patient's bite from both his right and left sides. You should determine if your patient is Orthodontic Class I, II, or III on each side.

## Class I

Your patient is Orthodontic Class I if the cusp of his upper canine fits in the embrasure of his lower canine and first bicuspid. The bite of each side of your patient will either will be Class I or won't be; there is no in between. Class I is the "orthodontic ideal" and usually this normal bite relationship allows your implant, orthodontic, crown, bridge, and veneer treatment to have higher success rates.



Class I, the "Orthodontic Ideal"

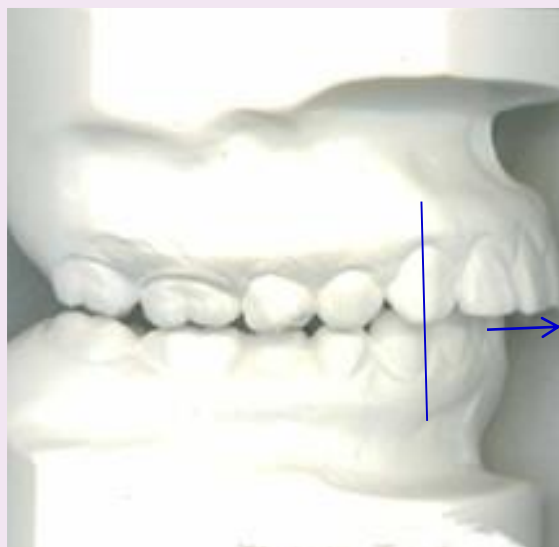
## DID YOU KNOW?

Understanding that your patient is Class II allows you to know that restorative treatment may be more difficult.

### Class II

Your patient is Class II if his upper arch is too far forward or his lower arch is too far back to be Class I (overbite/overjet). A Class II position can be a dental or skeletal problem or both. Bonus tip: you can determine if the cause of his Class II is skeletal by tracing and analyzing your patient's cephalometric x-ray.

Understanding that your patient is Class II allows you to know that restorative treatment may be more difficult, enabling you to correct it or set the appropriate patient expectations before you start treatment. If you and your patient would like to treat this bite relationship, further understanding of the severity of the Class II is needed. Although Class II treatment will depend on certain factors like how many millimeters of Class II are present, treatment often includes the use of Class II elastics within the mechanics stage of orthodontics.



7mm Class II, 10 mm overjet



Class III without anterior crossbite

### Class III

Your patient is Class III if his upper arch is too far back or his lower arch is too far forward to be Class I. A Class III position can be dental or skeletal or both. Although understanding the reasons for their Class III bite is helpful for its correction, just your understanding of their Class III relationship can greatly benefit them.

Identify your patients' Class III malocclusion at an early age, to help them avoid invasive and expensive surgery. Orthopedic forces provide a profound effect on this type of malocclusion and can normalize their skeletal relationship in a non-invasive way. If you have a patient with Class III, you should give them a full orthodontic exam or send him to a specialist for further evaluation. Like with Class II patients, it's important to know if your patient has Class III because you can better communicate that a crown or other restorations have a higher chance of failure.

Class III patients usually already know that they have an unaesthetic "under bite" relationship and ask about their options to fix it. If you identify their significant malocclusion early, there are several orthopedic and orthodontic appliances that can work well, otherwise, surgery is the only way to achieve a full correction.

**DID YOU  
KNOW?**

If you identify your patients' Class III malocclusion at an early age, you may help them avoid invasive surgery.



# 3

## Check for Crossbite Malocclusions

Crossbite is another way that teeth don't interdigitate properly. Every dentist should assess if their patients have any crossbite, as these can cause many dysfunctions problems like skeletal asymmetry, TMD and abnormal wearing of the teeth. Since crossbites rarely correct on their own, it is important to identify these issues in your exams.

### Anterior Crossbite

To see what type of anterior crossbite your patient has, give him a mirror and ask him to adjust his bite to the proper occlusion. If the patient can pull his mandible back, then he has a forward functional shift of the mandible. This patient's incisors will probably hit edge-to-edge and this type of crossbite is called a functional anterior crossbite (e.g. a pseudo Class III). This type of anterior crossbite is easier to treat than a skeletal anterior crossbite.

With any anterior crossbite, you should treat or refer your patient as early as possible (as young as 3) to normalize development. Treating or preventing this crossbite can include simple appliances, and/or orthodontics. If left untreated, patients may get unusual wear of their incisors, inadequate function and forward shifting of their mandible which can negatively affect their musculature.



Anterior Crossbite

## DID YOU KNOW?

Crossbites rarely correct on their own and those with them often have myofunctional problems and TMD.

### Posterior Crossbite

If your patient has posterior crossbite, they will be functioning in an abnormal fashion and can have myofunctional problems such as low forward tongue position, breathing issues and temporomandibular joint dysfunction (TMD). Treat (or send for treatment) as early as possible to minimize these issues. Treatment usually includes a maxillary expansion protocol and can improve mastication function and symmetry.

Bonus tip: if you notice that your patient has a posterior crossbite during your exam you can check to see if he has a bilateral or unilateral posterior crossbite. With a bilateral crossbite, the upper and lower midlines are centered. The vast majority of crossbites are bilateral and skeletal in nature. Unilateral crossbites are extremely rare and usually have a functional shift where the mandible is being held off to one side or the other. In a unilateral crossbite, the midlines are not centered and there could possibly be asymmetry of the chin.



Bilateral crossbite (left) and unilateral crossbite (right).



# 3 Assess for Dental Open Bite

Look to see if your patient experiences open bite. If they do, you will see an opening between their upper and lower teeth when they bite normally since all or some of their teeth have not erupted fully. Open bite could be either mild or severe, and either anterior or posterior or both. Open bite can cause lip incompetency, severe wear on the posterior teeth, gingival display, muscle strain, and abnormal swallowing.

It's important to assess the occlusion at your patient exam because identifying open bite early can allow you to easily fix it. Early treatment may include the use of orthodontics to close the bite and/or appliances to control the habits that contribute to his open bite. However, late treatment may need surgery to restore a normal occlusion. If left untreated, the bite can increase the vertical growth of the patient's face, affecting his dentofacial esthetics.



Open bite could be mild (left) or severe (right).



Anterior open bite



Posterior open bite



Both anterior and posterior open bite

# 4 Assess for Dental Deep Bite

Deep bite occurs when the upper incisor covers the lower incisor clinical crown excessively (it covers more than one third of the lower incisor). Deep bite ranges from mild to severe, with 100% deep bite occurring when the upper incisor fully covers lower incisor.

Understanding if your patient has deep bite will allow you to be a better advisor for their dental and joint health. If deep bite is left untreated, your patient could experience severe wear of the incisors and your restorative work, as well as headaches and TMD.



Dental deep bite can lead to severe wear of the whole dentition

# 5 Check for Spaces and Diastemas

Spaces and diastemas occur when the total width of your patient's teeth is less than that of his dental arches. This can also happen if he has lost teeth. Orthodontic treatment is the most effective way to correct spacing. Treatment can improve patients' appearances and reduce the need for restorative work.



Before and after orthodontic treatment



Before and after orthodontic treatment

# 6 Check for Crowding

When the total width of your patient's teeth is greater than that of the surrounding, teeth become crowded, misaligned, and crooked. This can cause hygiene and gum problems as well as complications with your restorative work.

If you do not address excessive crowding in the area, imagine how difficult or impossible it will be to restore any of the teeth in the area. If your patient does not want to fix the relevant crowding, you should discuss the limitations of any crown, bridge, and implant treatment to protect yourself legally. Whether mild or severe, crowding should always be addressed for these reasons. Although crowding is the most obvious problem patients mention to their dentist, it is also the most under diagnosed.

If your patient wants to treat his crowding, orthodontics is the best solution. With braces, front teeth generally advance as the teeth are straightened proportionate to the amount of crowding. Before orthodontic treatment is started, the doctor should predict the amount of advancement (usually through user-friendly diagnostic software like IPSOft®) to insure the bite fits and closes nicely after treatment.



A severe case of crowding corrected with orthodontics.



# Ready to begin orthodontic assessments?



Your patient exams already include oral pathology, periodontal screening, restorative assessment, esthetic assessment, hygiene assessment and now you can add in an orthodontic assessment. By being aware of your patients' orthodontic needs, you can produce a more comprehensive and successful treatment plan.

Depending on your level of orthodontic experience you may refer out cases, which sends thousands of dollars out of your office. With some training, you could provide high-level orthodontic treatment yourself and bring in a new source of revenue and care to your practice.

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A video player thumbnail featuring a man in a white shirt and patterned tie on the left. On the right, a dark grey box contains the title 'Orthodontic Classification for the GP' in white text. Below the title is a large orange play button icon and three small profile photographs of patients. At the bottom of the entire graphic is an orange bar with the text 'PLAY NOW' in white.

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“ Completely changed my understanding about treatment options of surgical vs. non-surgical options. You don't know what you don't know. And *this class really opened my eyes to the possibilities.* ”

- Dr. Dominic Tam