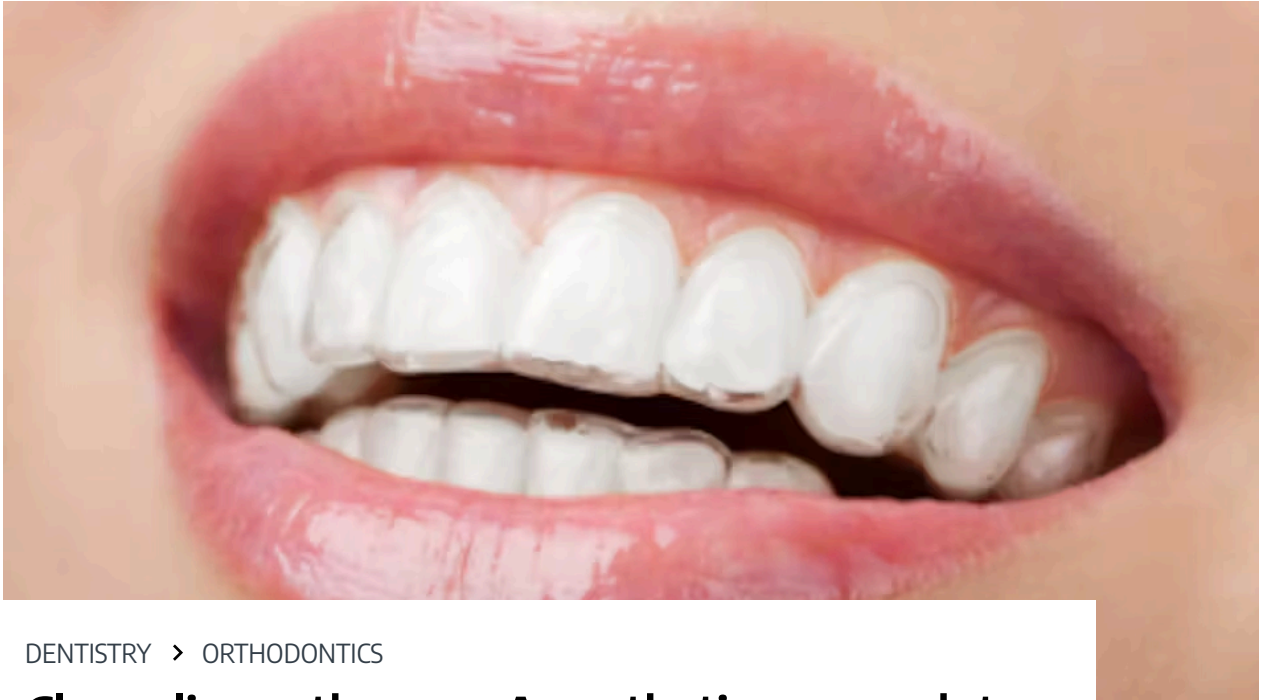




DENTISTRY > ORTHODONTICS

Clear aligner therapy: An esthetic approach to total patient care

Has your practice tapped into the clear aligner therapy market? It improve not only patients' esthetics, but also their overall oral health, not to mention your practice's bottom line.

Sept. 25, 2017

Gone are the days when dentistry focused on one tooth at a time. The ideal practice prides itself in providing comprehensive dentistry, which means providing general dentistry services as well as specialty care.

This article originally appeared in the Principles of Practice Management e-newsletter. [Subscribe to this informative twice monthly practice management ENL here.](#)

Orthodontia can be comprehensive in itself—it can enhance patients’ esthetics, improve their periodontal health, reduce occlusal trauma (i.e., broken teeth), and reduce headaches. A **clear aligner orthodontic therapy**, such as Invisalign, should be considered as a treatment option to help achieve both an esthetic and functionally healthy dentition.

Malocclusion and periodontal health

The dentition that can maintain properly positioned teeth (ideal occlusion) can be preserved much better than teeth that are maloccluded, resulting in a better chance of maintaining long-term periodontal health and a reduced likelihood of chipping and breaking. Malocclusion can also cause temporomandibular joint disorders (TMD), gingival recession from increased occlusal forces, or an increased bacterial buildup that can lead to gingival inflammation and/or periodontal pocketing.

Malocclusion is often overlooked as a reason for these problems, and correcting the occlusion can promote the long-term health of patients’ dentition and dramatically improve their esthetics. Some dentists and patients may choose to treat malocclusion by preparing teeth for crowns or veneers. While it may address the cosmetic concerns, this approach may not improve the underlying malocclusion.

Adults and orthodontics

In 2013 the American Academy of Orthodontics (AAO) estimated that 27% of all US and Canadian orthodontic patients are adults. A study conducted by the AAO concluded that 75% of adults surveyed described improvements in career or personal relationships, and that this boost was due to an enhanced smile from orthodontics. Furthermore, 92% of survey respondents said they would recommend orthodontic treatment to other adults.

(1) For general dentists and orthodontists trained in clear aligner therapy, this presents a great opportunity to achieve practice growth as well as overall patient health. If dental

professionals can show patients that aligners can help improve their smiles and overall oral health, they will increase the chances of case acceptance.

Clear aligner therapy can be a financially viable solution to help patients achieve optimal occlusal and periodontal health in an esthetic manner while also increasing business profitability. Malocclusion can affect approximately 75% of American adults.(2) Align Technology estimates that starting one case per week can result in a practice's increased annual production of over \$200,000.(3) The use of CAD/CAM dentistry can further increase the profit margin and enhance case acceptance.

Getting started

The first step is to evaluate your patient base and determine whether clear aligner therapy would be a valuable treatment option for any of your current patients. If you have patients with crowded teeth, non-esthetic spacing, gum disease possibly worsened by misaligned teeth, TMJ, recession, or abfractions caused by malocclusion, then you have a plethora of opportunity in front of you.

The next step is to take a fundamentals course through a company such as Align Technology that will train you and your staff in basic treatments. Once you have the proper training, it is up to you to educate your patients about the benefits of clear aligner therapy and start changing their smiles for the better.

Based on current available data, providing clear aligner therapy can benefit both your patients and practice. It not only serves as a great treatment option to help achieve optimal clinical and esthetic outcomes for patients, it can also help increase practice growth.

For the most current practice management headlines, click [here](#).

For the most current dental headlines, click [here](#).

Nicole Smith, DDS, is a graduate of New York University College of Dentistry. She is a Pacific Dental Services ((PDS)-supported owner dentist and an Invisalign Preferred

Provider. Dr. Smith is a PDS Institute faculty member and serves on the Advisory Board for The New Dentist magazine.

References

1. Adults are seeking orthodontic treatment in record numbers. Dental Tribune America website. [dental-tribune.com/articles/news/usa/28968_adults_are_seeking_orthodontic_treatment_in_rec](https://www.dental-tribune.com/articles/news/usa/28968_adults_are_seeking_orthodontic_treatment_in_rec) Published April 30, 2016. Accessed June 7, 2017.
2. Brunelle JA, Bhat M, Lipton JA. Prevalence and distribution of selected occlusal characteristics in the US population, 1988-1991. *J Dent Res*. 1996 Feb;75 Spec No:706-13.
3. Grow your practice with Invisalign brochure. Align Technology website [aligntech.com/solutions/invisalign](https://www.aligntech.com/solutions/invisalign). Published 2014. Accessed June 7, 2017.

Sign up for DentistryIQ eNewsletters

☐ Morning Briefing

Morning Briefing keeps you current on topics and developments in dentistry, and provides a look at day-to-day industry news and current events. (Daily)

☐ Clinical Insights

Clinical Insights is the dental practitioner's source for emerging trends in patient care and support for the whole team. Packed with clinical how-tos, case studies, pathology spotlights, and industry updates, readers can remain informed and ahead of the curve in an ever-changing healthcare profession. (T-W-Th)

☐ Dental Academy of Continuing Education

DACE presents links to and descriptions of a wide array of CE opportunities, often at discounted prices or even free. (Monthly)

Email Address

Country



SIGN UP

By submitting your information, you are agreeing to Endeavor Business Media's [Terms of Service](#) and [Privacy Policy](#).

DentistryIQ Pathology Challenge No. 2

[Vicki Cheeseman](#)

Oral-systemic Health

New report explores the critical link between oral health and Alzheimer's disease

[Kaz Rafia, DDS, MBA, MPH](#)



Resources

Kaz Rafia, DDS, MBA, MPH

Dental Hygiene

Fell Sulcular Sweep: A better way to control gum disease and decay and cover floss's shortcomings

[William Fell, DDS](#)



Patient Communication and Patient Financing

Patients should avoid these 6 TikTok dental trends

[Meg Kaiser](#)



Dentistry

Summer dental care: Tips for maintaining oral health all season long





DENTISTRY > ORTHODONTICS

How to prevent root resorption using the Golden Rule of Orthodontics

There are four things that cause an orthodontist to lose sleep. Here, Joseph Morneau, DDS, chief of orthodontics in two hospitals, focuses on one—root resorption. In this article you'll learn a protocol to prevent root resorption by using the Golden Rule of Orthodontics.

Nov. 9, 2020

Editor's note: There is nothing worse than telling patients in ortho they are going to lose their tooth due to root resorption, because what you say and what they hear are two different things. "My body is eating my tooth?!" Can this be prevented? The answer is yes, by following the Golden Rule of Orthodontics.

As chief of orthodontics at NYU Lutheran Pediatric Dental Residency and at Rady Children's Hospital–San Diego, I regularly provide didactic and clinical instruction to nonorthodontic residents. I find that orthodontics is a topic that most of my residents are eager to learn about. I structure this education so that the learning experience will be rewarding rather than punishing, so with that in mind, I begin instruction for each new class of residents with the Golden Rule of Orthodontics: *Primum non nocere*.

While not specifically in the Hippocratic Oath, *primum non nocere* is believed to be derived from it and means *first, do no harm* or *above all else, do no harm*. In other words, before you do anything to a patient, make sure that you are not making matters worse. What good does it do to straighten teeth if in doing so you cause the patient to lose them? The point of this article is not to scare or deter you from engaging in orthodontics, but to give you a foundation that will protect both you and the patient.

ADDITIONAL READING | [Orthodontic case study using the Differential Straight-Arch Technique yields remarkable results without surgery, extractions, or headgear](#)

What is the worst thing that could happen? The answer, of course, is death. While treatment may have gone horribly awry, if your patient dies due to orthodontic treatment, that is the worst possible outcome. Always make sure to check the medical history.

Other than death, what will cause an orthodontist to lose sleep? Four things top the list:

1. Root resorption
2. White spot lesions (also known as decalcification)
3. Periodontal disease
4. Moving teeth out of bone

In this article, I will discuss the first—*root resorption*. Root resorption (figure 1), or shortening of the roots, occurs in almost every case of orthodontic tooth movement. In most cases, it is so insignificant that it is hardly—if at all—noticeable on successive x-rays. However, some patients react more severely. If the roots become too short, the teeth can obviously become mobile or even be lost. While there are theories about what causes the roots of some patients to resorb more than others, there is no reliable way to predict root resorption.



Figure 1: Root resorption

Before you begin treatment, take records. These include photos, x-rays, and diagnostic models. It is important to document the state of the patient prior to treatment. Regarding root resorption, it is essential to take radiographs. Any orthodontic treatment should include pretreatment and post-treatment radiographs that allow visualization of the roots. I recommend panoramic radiographs for this purpose. While it is common in general dentistry to take panoramic x-rays every five years, this is too long for patients in orthodontic treatment. Root resorption can be evident radiographically in as little as six

months of orthodontic treatment. Because of this, I take panoramic x-rays every six to eight months in my practice.

ADDITIONAL READING | [Maxillary expansion or bicuspid extraction: A case study in orthodontics](#)

Notice the resorption on the roots of the maxillary lateral incisors in Figure 2. This was caused not by orthodontics but by the erupting canines. Now imagine an orthodontic setup commonly called a 2x4 (figure 3). A 2x4 typically means the placement of orthodontic brackets on both first molars and the four incisors in the



Figure 2: Severe root resorption evident on maxillary lateral incisors

same arch. This is often used to correct an anterior crossbite in the mixed dentition. If done improperly, the roots of the maxillary lateral incisors can be forced into the hard enamel crowns of the erupting permanent canines. This sort of error can lead to the same result seen in Figure 2. The patient could ultimately lose teeth because of this. This is something to always be mindful of when doing orthodontics in the mixed dentition. You don't have to be a perfectionist when bonding brackets, but the general rule of thumb should be to avoid distalizing the roots of the maxillary

lateral incisors. In other words, when bonding the lateral incisors in situations like this, err on the side of mesializing the roots. This will prevent the roots from being driven into the crowns of the canines. You may be thinking that this does not provide the ideal esthetic result. You are right!

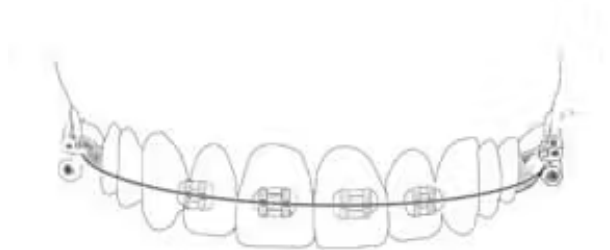


Figure 3: 2x4 appliance

However, esthetics is not the primary goal of this early treatment. And remember, if the patient loses a tooth, that is certainly not an ideal esthetic result.

In my practice, I typically do not provide a retainer for this treatment. I normally use such a procedure to correct an anterior crossbite. Once corrected, it is very rare for an anterior crossbite to relapse.

Furthermore, I explain to parents that a retainer could inhibit needed flexibility of tooth movement. While I'm willing to place an occasional fixed splint lingual to upper central incisors, I will not splint the upper

lateral incisors to the central incisors. The roots of the lateral incisors need to be free to move out of the way if the erupting canines bump into them. Splinting the lateral incisors increases the chance of root resorption (figures 4a and 4b). Removable retainers can also be used, but they are not perfect either. They can inhibit or alter development of the maxilla and the erupting dentition. Whatever retention protocol you choose, remember the golden rule to do no harm.

When root resorption is noticed, the best option is to stop treatment. It is important to explain that some degree of root resorption occurs in all orthodontic patients. In most cases, it is insignificant. Severe root resorption is rare, and there is no way to reliably predict who will experience it. All we can do is monitor for it and react appropriately when we recognize it.



Figure 4a: Fixed lingual retainers placed from lateral incisor to lateral incisor



Figure 4b: Two years later, root resorption is evident on the maxillary left lateral incisor.

ADDITIONAL READING | [Periodontally accelerated osteogenic orthodontics reduces treatment times in comprehensive orthodontic cases](https://www.dentistryiq.com/dentistry/orthodontics/article/16365987/clear-aligner-therapy-an-esthetic-approach-to-total-patient-care)

Some evidence exists that stopping orthodontic tooth movement for six months or more will minimize root resorption if treatment is reinitiated. However, this is not conclusive, and there is no guarantee that such a protocol will work. Any decision to reinitiate should probably be made by an orthodontist.

Providing orthodontic treatment can be a very rewarding experience, when performed properly. Proper treatment requires planning. The safety of the patient is of paramount importance and the foundation upon which a good treatment plan is built. Always remember the Golden Rule of Orthodontics: **Do no harm.**

Editor's note: This article appeared in *Chairside Daily* newsletter, a publication of the Endeavor Business Media Dental Group. Read more articles [at this link](#) and subscribe [here](#).



Joseph Morneau, DDS, is a 2001 graduate from Louisiana State University School of Dentistry. He received his orthodontic specialty certificate from St. Barnabas Hospital in New York. He is a veteran of the US Navy and has served as a dental officer in Italy, Japan, the Middle East, and California. It was during this time that he realized his passion for orthodontics. He now practices full time as an orthodontist in **private practice** in San

Marcos, California. Dr. Morneau is also chief of orthodontics at NYU Lutheran Pediatric Dental Residency and at Rady Children's Hospital—San Diego. He likes spending time

with his beautiful wife, Vera, and their happy and healthy son, Hugo. He also enjoys surfing and travel in his spare time.

Sign up for DentistryIQ eNewsletters

☐ Morning Briefing

Morning Briefing keeps you current on topics and developments in dentistry, and provides a look at day-to-day industry news and current events. (Daily)

☐ Clinical Insights

Clinical Insights is the dental practitioner's source for emerging trends in patient care and support for the whole team. Packed with clinical how-tos, case studies, pathology spotlights, and industry updates, readers can remain informed and ahead of the curve in an ever-changing healthcare profession. (T-W-Th)

☐ Dental Academy of Continuing Education

DACE presents links to and descriptions of a wide array of CE opportunities, often at discounted prices or even free. (Monthly)

Email Address

Country



SIGN UP

By submitting your information, you are agreeing to Endeavor Business Media's [Terms of Service](#) and [Privacy Policy](#).

Oral-systemic Health

New report explores the critical link between oral health and Alzheimer's disease

[Kaz Rafia, DDS, MBA, MPH](#)



Resources

Kaz Rafia, DDS, MBA, MPH

Dental Hygiene

Fell Sulcular Sweep: A better way to control gum disease and decay and cover floss's shortcomings

[William Fell, DDS](#)



Patient Communication and Patient Financing

Patients should avoid these 6 TikTok dental trends

[Meg Kaiser](#)



Dentistry

Summer dental care: Tips for maintaining oral health all season long

[Nina Garlo-Melkas, MSc](#)



[Load More Content](#)



[About Us](#)

[Contact Us](#)

[Advertise](#)

[Do Not Sell or Share](#)

[Privacy Policy](#)

[Terms & Conditions](#)

© 2024 Endeavor Business Media, LLC. All rights reserved.

