

Interceptive Orthodontic Treatment in Children's Dentistry

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Abstract

The goal of interceptive orthodontic therapy is to lessen or completely eliminate the need for treatment in the permanent teeth. Similar to complete treatment with full fixed equipment, the main benefit of such a therapy may be that it is technically straightforward and reasonably affordable. The early losses of primary molars and non-nutritive sucking behaviors have negative impacts on occlusal and dental health, necessitating preventive actions. In general, this would mean fewer extractions, at this point. Treatment with interceptive orthodontics can begin as early as age 6 to 10. Additionally, interceptive therapy itself need not require braces; rather, it can make use of a variety of different methods, such as detachable appliances (plates), specialized equipment, and Behavioral/habitual adjustment. Comprehensive orthodontics (phase 2) may not or may only be required in part in the future.

Keywords: Orthodontic therapy, Dental health, Interceptive orthodontics, Children's Dentistry

Introduction

Interceptive orthodontics, sometimes referred to as Phase 1 Orthodontics, is early intervention to address problems such as aberrant bites that appear earlier in life and subsequently lead to lifelong skeletal abnormalities. This combination of orthopaedic and orthodontic therapy is provided to stop or lessen growing malocclusions or untimely tooth eruptions in order to promote healthy facial skeleton development. At Smiles on Queen, we give your kid the treatment plan he or she need using anything from habit-breaking devices, removable retainers, to set brackets. Thumb sucking and prolonged pacifier usages are habits that can result in dental problems such as crossbites, narrow dental arches, overbites, and asymmetrical development. If detected early enough, interceptive orthodontics can treat the majority of these disorders. Long-term, if your kid wishes to have comprehensive orthodontics done in the future or as an adult, it may not be necessary to remove permanent teeth if the right orthodontic therapy is given early in life. In the event that an untreated open bite develops, it can also avoid the need for costly and uncomfortable jaw surgery. In the short term, it can correct a "overbite" issue that a child is teased about from a young age, safeguard exposed teeth from breaking during play or sports, and promote healthy, aesthetically pleasing growth that will shorten and simplify any future treatment [1-3].

Early orthodontic therapy, sometimes referred to as Interceptive orthodontics or Phase I orthodontics, is only effective when started in youngsters whose mouths are still developing. Adult teeth normally begin to erupt between the ages of six and seven. Future orthodontic issues become obvious at this point, and diagnosing and treating issues is far simpler when a kid is still developing than when they are fully grown. In order to provide enough room for the adult teeth to erupt, interceptive orthodontics aims to direct and affect the growth and development of the jaws.

Discussion

In Phase 2 orthodontics, it may also be necessary to remove teeth or expand the jaw. Numerous studies have demonstrated that unhealthy dental habits, which eventually result in poor bone or skeletal growth, are the primary cause of crowding in children in the majority of instances. This could be caused by improper tongue positioning, a poor lip seal, or mouth breathing. By providing extra space for the adult teeth to erupt into, interceptive orthodontics tries to correct

the way the face and jaw develop. Interceptive orthodontics not only straightens crowded teeth but also enhances a child's facial features. A misaligned jaw or tooth can cause malocclusions. It has an impact on how a youngster chews grins, brushes his teeth, and even feels about his smile [4].

When the bottom teeth don't line up with the upper teeth, crossbites happen. When you bite down, the upper front teeth will occlude the lower front teeth if you have an anterior crossbite (under bite). When the top back teeth snag against the bottom back teeth, this is referred to as a posterior crossbite. Mismatched teeth or jaws, or a combination of the two, can result in cross bites. Early action is essential to prevent the issue from getting worse over time. Additionally, smaller children can stretch their upper jaws more readily and pleasantly. Although jaw-expanding devices may be used on adults and teenagers, they are most useful on young children since the jaw has not yet reached its full size.

When there is insufficient vertical tooth overlap, either at the front or the rear of the mouth, open bites develop. An improper rear tooth alignment is referred to as a posterior open bite. The more typical bite is anterior open. Open bites occur when the upper front teeth do not correctly overlap the lower front teeth in the vertical direction, causing the rear teeth to contact while biting down. As a result, there is a vertical gap formed between the top and bottom front teeth. Open bites can result from improper jaw development or size, repetitive finger sucking, tongue pushing (pressing the tongue against the front teeth), or mouth breathing. Without treatment, issues with eating, swallowing, speaking, or the appearance of the tongue pushing through teeth may occur. The most typical issue is a wide gap (diastema) between the top front teeth. This gap seldom heals without treatment (often braces or Envisaging) once all adult teeth have emerged into the mouth (generally around the age of 12). Early assessment is crucial to make sure that the excessive gap doesn't interfere with the regular eruption of permanent teeth.

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Food being trapped in wide spaces is another issue that comes with too much spacing, and this can cause gum disease [5-7].

Upper front teeth that protrude are referred to as "buck" teeth while they are protruding. Over jet is the word used in dentistry. When the lower jaw is too far back, the upper jaw is too far forward, the teeth have grown in at an angle, or a combination of these circumstances, the teeth protrude. Patients who have a deep bite (excessive vertical overbite) may also have projecting front teeth. The front teeth should be corrected as soon as possible since they are prone to injury (fracturing or shattering), especially in active kids. The consequent dental damage for kids can be rather severe (particularly for those who enjoy sports). Additionally, closing the mouth and lips is painful due to protruding teeth. Dry mouth and tooth decay could come from this.

When upper front teeth almost entirely cover lower front teeth, the result is a deep bite, also known as an overbite or a closed bite. Typically, a tiny lower jaw is what causes this kind of malocclusion. Other factors include lower teeth that are missing. A deep bite can also be caused by overdeveloped biting muscles, which are frequently present in people who clench or grind their teeth. Correcting an overbite (deep bite) minimizes painful chewing issues and excessive tooth wear. An orthodontist might need to "open the bite" by shifting the top and lower teeth, depending on how severe the issue is. Patients with overbites also frequently have crowding and misplaced teeth as problems [8-10].

Interceptive orthodontics quick facts

- Comprehensive orthodontic care must always be received; interceptive orthodontics cannot take its place. However, it shapes the jaws for proper growth, produces ideally shaped arches for future teeth, and lessens the need for tooth extraction in the future.
- As soon as the first set of primary molars erupts at age seven, preventive orthodontics begins.
- Between the ages of 11 and 14 for males and 12 to 15 for girls, comprehensive orthodontic treatment can begin.
- Comprehensive orthodontic treatment for your child might be made easier with the aid of interceptive orthodontics.
- An impacted tooth can be avoided with interceptive orthodontics.

Early orthodontic treatment's advantages

- At the age of seven, there is significant crowding and misalignment (keep in mind that the permanent teeth need more space to correctly erupt because they are larger than the primary teeth).
- Early tooth loss brought on by trauma or disease (a space maintainer can stop neighbouring teeth from moving into the empty area and obstructing the underlying permanent tooth)
- Front teeth that stick out and are prone to damage
- A significant overbite, underbite, open bite, or crossbite (posterior or anterior) are examples of skeletal problems.

- Issues with speaking clearly, chewing, or biting

Conclusion

The first part of the two-phase pediatric orthodontic therapy is referred to as interceptive treatment or phase one treatment. Children's teeth are straightened as part of the two-phase pediatric orthodontic treatment provided at our dental offices in Carmel and Briarcliff, as well as the development of a healthy bite. Phase one involves laying the groundwork for appropriate jaw and dental growth. Early orthodontic therapy is beneficial for treating dental issues such as early or late loss of baby teeth, misplaced or crowded teeth, under bites, overbites, anterior cross bites, posterior cross bites, etc. To avoid future major oral health problems, early treatment is crucial. The teeth are left alone to emerge normally during the resting period after the phase one or interceptive therapy. A phase one treatment that is effective will have made the space necessary for permanent teeth to establish their eruption route. The second part of therapy, often known as phase two, is subsequently administered after this time of rest. Depending on your child's treatment plan, we may utilize a variety of appliances during interceptive therapy, including palatal expanders and/or partial sets of braces. The duration of this orthodontic therapy is between six and twelve months. In order to make living with braces less difficult, our dental expert explains the oral hygiene regimen to you and your kid.

References

1. Mason M, Spolaor F, Guiotto A, De Stefani A, Gracco A, et al. (2018) Gait and posture analysis in patients with maxillary transverse discrepancy, before and after RPE. *Int Orthod* 16: 158–173.
2. Kassem HE, Marzouk ES (2018) Prediction of changes due to mandibular autorotation following miniplate-anchored intrusion of maxillary posterior teeth in open bite cases. *Prog Orthod* 19: 1–7.
3. Fujii T, Torisu T, Nakamura S (2005) A change of occlusal conditions after splint therapy for bruxers with and without pain in the masticatory muscles. *Cranio* 23: 113–118.
4. Monaco A, Streni O, Marci MC, Sabeti L, Marzo G, et al. (2004) Relationship between mandibular deviation and ocular convergence. *J Clin Pediatr Dent* 28: 135–138.
5. Closs L, Pangrazio Kulbersh V (1996) Combination of bionator and high-pull headgear therapy in a skeletal open bite case. *Am J Orthod Dentofac Orthop* 109: 341–347.
6. Cohen-Levy J, Cohen N (2011) Computerized analysis of occlusal contacts after lingual orthodontic treatment in adults. *Int Orthod* 9: 410–431.
7. Nota A, Tecco S, Ehsani S, Padulo J, Baldini A (2017) Postural stability in subjects with temporomandibular disorders and healthy controls: A comparative assessment. *J Electromyogr Kinesiol* 37: 21–24.
8. Melsen B, Agerbaek N, Eriksen J, Terp S (1988) New attachment through periodontal treatment and orthodontic intrusion. *Am J Orthod Dentofac Orthop* 94: 104–116.
9. Carey JP, Craig M, Kerstein RB, Radke J (2007) Determining a relationship between applied occlusal load and articulating paper mark area. *Open Dent J* 1: 1–7.
10. Bayani S, Heravi F, Radvar M, Anbiaee N, Madani AS (2015) Periodontal changes following molar intrusion with miniscrews. *Dent Res J* 12: 379–385.