

Really Straight Teeth

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Adult & Child Braces and Early
Interceptive Treatment for Ages
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Interceptive Early Orthodontic Treatment

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It is true that no subject (aside from the need for extraction) has undergone such cycles in popularity among orthodontic specialists than early (interceptive) orthodontics. Over the past 50 years, articles have been published documenting the success of early orthodontic intervention in the correction of malocclusion. Interestingly, the issues raised remain the same:

- 1) Is it possible to intercept a malocclusion and thus prevent its full expression at a later date?
- 2) Can extractions of permanent teeth be avoided or reduced with early treatment?
- 3) Can malocclusion with a skeletal basis be successfully corrected using facial growth?

I will discuss these three views individually, providing a broad overview that permits the reader to view the subject from practical and current perspectives.

#1: Can we intercept a Malocclusion?

The subject of early interception of malocclusion has been extensively reported in the dental and orthodontic literature for many years. A consensus

has developed in a few areas.

First, treatment in the full deciduous dentition seems to be inappropriate if the objective is tooth movement. Skeletal problems (Class II or Class III), however, seem amenable to correction in this group via orthopedics, but only if mechanics can be devised to harness facial growth and patient cooperation.

A more complete answer to the question, "Can interceptive orthodontics successfully alleviate a developing malocclusion?" comes with a review of the literature on early mixed dentition treatment (defined as the stage where patients have permanent first molars and incisors, and deciduous canines and molars). The literature clearly supports the position that in this age group, skeletal correction of Class II, Class III, crossbite, and open bite malocclusions are very much possible. Further, it dictates that such correction is best done at the ages 6-9 where facial growth is plentiful and patient cooperation likely to be the greatest.

By definition, interceptive treatment cannot be accomplished with a full complement of permanent teeth. Only corrective treatment can now be done, and the potential for skeletal correction is minimal. It also takes a while to set a case up for functional growth in my hands. For example, a patient needing lower jaw growth often needs expansion of the arch forms and alignment of the incisors to actually know exactly where I need to get the lower jaw to position out to in a new Class I position. It is sort of like preparing adult orthodontic cases for jaw surgery. The surgeon needs to know where to set the lower



jaw out to, so I expand the arch forms and move the incisors to where the lower jaw will articulate out to at the time of surgery. Therefore, it is best to refer a child as early as age 6-7. This will allow me to see what is going on with space requirements and jaw alignment and to see when treatment should start or to place on recall.

#2: Can we avoid Extractions?

The second question deals with the reduction of permanent teeth extraction via early treatment. The controversy dates to the debates between Edward Angle and Calvin Case in the 1890's. Contemporary orthodontists fall into the Tweed School or the Begg School of thought (which favor extractions), and the Bioprogressive groups (which do

not). Surveys of orthodontic practices today show variations from 5-10% of cases requiring extractions to over 50%! The literature would support a clear trend toward fewer permanent extractions regardless of the "school" of orthodontics a practitioner ascribes to. The advent of early treatment is the cause for this. But, do not get me wrong, I will call a spade a spade and do a serial extraction if it needs to be done. It is the cases that could avoid extractions that are the concern here.

Today, there are even cases that are borderline serial extraction cases that are best treated with interceptive techniques. This is done along with a serial extraction and when the premolars need extraction, many times no extractions are needed or the 2nd premolars can be removed instead to eliminate bringing the incisors too far

towards the back of the mouth (that ends up hurting the lip profile).

#3: Can we correct "Skeletal" Malocclusions via facial growth?

The third historical issue dealing with early treatment deals with what we call "orthopedics." Orthopedics is skeletal correction via growth alteration. This area, too, has many "groups" promoting various methods. The literature would support the following basic conclusion on orthopedic correction:

- 1) The maxilla is an incredibly adaptive bone. We can orthopedically affect its growth in all three planes of space (length, width and height). Such treatment, because it requires facial growth, should be done early.
- 2) Recent studies shed light on the success of lower jaw growth and Class II correction done in Early Interceptive Treatment (Phase I). Success rates in recent studies are 75% or higher.

Example of Lower Jaw Growth Case

The below patient was presented as part of Board Certification to become a Diplomate of the American Board of Orthodontics in 1993. Expansion was first done in both arches and then the overjet was corrected with braces and the 1st molars and incisors along with special elastics and coils. Bulky plastic growth appliances (Herbst, etc.) have stopped being used to decrease enamel being damaged and the high success rate of growth with new techniques that have been out for years. All cases are finished with gnathological occlusion learned from heavy background in prosthodontic training before going to orthodontic school.



Summary

To summarize, early treatment is becoming an ever larger part of the contemporary orthodontic practice, as it will allow more patients to be treated without permanent extractions. It will allow dramatic skeletal and facial improvements with minimal appliances and at an earlier age. This allows young children to mature, interact socially, and develop mentally unencumbered by disfiguring skeletal and dental malocclusions.

Oral surgeons in the area have indicated to me recently that many patients today who need jaw surgery as part of their orthodontic treatment do not have insurance coverage for the surgical portion. Many oral surgeons who would get approximately \$5,000 for a surgical case are receiving as low as \$1,300 to do the same care. This leaves the patient in an unusual predicament. So, if there is any doubt that a patient should have an orthodontic exam early (as recommended by the American Association of Orthodontists at age 7) it would be best to have the child seen to provide the best future for the child dentally and economically.

About Dr. Fox and his office

Dr. Fox is one of only a few orthodontists in the entire Broward County who are Diplomates of the American Board of Orthodontists. While at the University of Tennessee, he learned early treatment extensively along with adult orthodontic treatments. While there, he completed one of the largest Master's thesis in 75 years in the school's history. It was an extensive study about how the facial growth is affected in the newborn from a pregnant mother taking aspirin or acetaminophen during pregnancy using dosages

equivalent to a two-day period at the 13-week of pregnancy. For this, Dr. Fox received the American Association of Orthodontists' highest award in 1987 for the most meritorious 1st research.

Dr. Fox is also recognized in Who's Who in America. In dental school he was elected into OKU and graduated #1 in class of 110. While in dental school he completed research with the oral surgery department on the different causes of paraesthesia of the lower lip and chin including extractions of wisdom teeth, car accident trauma to the lower jaw and different jaw surgery procedures. He helped to codify the types of paraesthesia and helped to find specific findings of when to expect the "numbness" to go away in patients once paraesthesia is received.

He has treated over 5,000 cases with emphasis in early interceptive treatment (ages 6-9), adult orthodontic cases with and without periodontal situations, TMJ, and orthognathic surgery cases. His office is designed for efficiency along with comfortable patient care. He has a totally chartless office. X-rays and photos of any patient can be seen at any chair in the office with each chair having its own computer monitor.



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Important Note

The general practitioner is in an excellent position to detect, intercept and correct minor orthodontic problems early, thus making it unnecessary for the child to go through complex orthodontic treatment at a later date. Most patients who have Phase I early treatment usually only have 12-18 months of simple Phase II teenage braces. 5-10% never need Phase II. Getting the child in at age 6-7 is ideal; after age 10, we're lucky if prevention can be accomplished; and referrals that come after age 10 come too late for prevention or early treatment interception.

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