

Straight Teeth

© 1999 Fox

South Florida's Full Service, Full Time Orthodontist



Volume 1, Issue 5

Adult & Child Braces and Early Interceptive Treatment for Ages 6-11

Inside this Issue

- 1 Early Interceptive Expansion Treatment (ages 7-8)
- 1 What causes narrow bites?
- 2 Can narrow bites be prevented or kept from worsening?
- 2 Can a narrow bite be treated in the age group of 6-8 years?
- 3 About Dr. Fox
- 3 Important Note

Donald M. Fox, D.D.S., M.S.

Early Interceptive Expansion Treatment

Donald M. Fox, D.D.S., M.S.
Diplomate of The American Board of Orthodontics

The so-called "narrow" bite is one of the most unrecognized and misdiagnosed in the dental profession.



Interestingly, most narrow bites do not look like they need treatment because some patients do not have crooked teeth (like the above picture) or "it appears" that all the teeth will fit. What needs actual expanding is the width of the upper and lower arches, not just in the molar region but in the premolar region. In most cases that do have this malocclusion, the patient requires early interceptive treatment.

The following areas will be discussed:

- 1) What causes narrow bites?
- 2) Can narrow bites be prevented or kept from worsening?
- 3) Can a narrow bite be treated in the age group of 6-8 years?

#1: What causes Narrow bites?

The subject of what causes narrow bites has to do mainly with the areas of genetics and occlusal interferences. Many narrow problems "run in the family" and have been traced all the way up the family tree. The classic arch appearance of this type of patient has a narrow U-shaped look but they can also have a V-shaped arch.

The dental appearance can have the premolars and molars tipped lingually (as in the picture to the left) and "not appear to need widening."

Another cause of narrow bites is due to thumb sucking. The buccinator muscle during sucking collapses the arch around the thumb. Most all thumb suckers have narrow bites that need expanding.

Another cause I have seen is due to mouth breathing. One theory of how the upper arch expands is that the tongue expands it when it hits the roof of the mouth during swallowing. A mouth breather does not usually do this action if any or at all.

One of the ways to diagnose narrow arches is using the naked eye and see if it appears narrow or whether a cross bite exists. Another way is to use computer photography that we utilize in our office to remove the patient's teeth and place a broader smile in the patient to see if an improvement occurs. This helps the patient to also become aware of the



narrow problem and be motivated to have their child's mouth widened early.

#2: Can narrow bites be prevented or kept from worsening?

The second question deals with the early detection and referral of any patient who has a narrow bite or cross bite problem. This should be at age 7.

The key is to know the rule "expand it when you see a narrow problem or crossbite." There are patients I have expanded as early as 4 and 5 years old because they were wearing down their front incisors down severely from a posterior crossbite.

The upper arch needs to be expanded before the age of 10 in most patients. To understand this I need to explain the

growth of the upper jaw. Before birth, the roof of the mouth does not exist. The tissue of the roof of the mouth comes together right before birth. That is the white line you see running down the roof of patients' mouths. The bone, under the tissue, comes together at the midline of the roof of the mouth and does not totally fuse together until age 10. The cartilage between the left and right sides of the roof of the mouth actually gets replaced with bone at this age.

#3: Can a narrow bite be treated in the age group of 6-8 years?

The third historical issue dealing with early treatment deals with what we call "orthopedics". Orthopedics is skeletal

correction via growth alteration.

The narrow bites have to be diagnosed properly to see when each step of the early treatment should commence.

Expansion can be done in the teenage years but it is very risky with the potential to push roots through the cortical plates. Also, the arches may look like they expanded but the crowns of the teeth tipped out with the root tips not moving. Later, the expansion will just relapse after the braces are removed.

Many patients can avoid having permanent teeth extractions by early interceptive expansion. Having expansion does not guarantee nonextraction in all cases. Also, you may not know that early expansion can shift the extractions to the 2nd premolars instead of 1st premolars. This is especially critical in patients who have a flat lip profile and extracting 2nd premolars will avoid the "dished-in" look from extractions.

I have in my practice seen over and over a patient who has been told to wait to expand their narrow bites. The real problem comes with the patient who has a severe crossbite and a high palatal vault. The patient comes in after age 12 and they then have to have upper surgical expansion. These "high roof", narrow arch patients are very hard to expand due to the structure of the bone. Age 7 is a good age to refer all types of narrow bite patients for treatment.

Another advantage of having early interceptive expansion is that it helps with breathing problems the child may have. The roof of the mouth is also the floor of the nose! When we expand the upper arch it usually helps with increasing the airway of the nasal passages.

Example of an Early Treatment Narrow Bite Case

The below patient had narrow arches. She had expansion of both arches at age 8. Later, she had full braces for 18 months. There were no extractions and she obtained a fuller look in the width of her mouth. Notice the corners of her mouth before and after. Her occlusion was finished with canine rise and both sides and equilibration was done to finalize the occlusion.



PHI
BEGIN



PHII
END



Begin Phase I



End Phase II

Another advantage of expanding in the early ages is a patient undergoing a serial extraction. Many serial extraction cases collapse in arch width during treatment. Expansion of the arches (not every case) helps to maintain a broad healthy looking smile.

There is false information that exists that if expansion is done too early that it will just relapse. Relapse is due from too fast of expansion or not holding the expansion result long enough. It can also come from expanding at too late an age. In comparison, relapse potential or not being able to expand at all is a higher risk in the teenage years!

Braces are usually done in 3 steps. First, the arches need to be expanded and crossbites corrected if they exist. Second, the teeth are moved to the desired position in the arch (closing spaces is included here). Third, final alignment is done (root alignment is included here). So, expansion can eliminate the first step early so that the overall treatment time with full braces will be less.

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 early to provide the best future for the child dentally and economically.

About Dr. Fox

Dr. Fox learned how to treat severe early treatment cases at the University of Tennessee which is one of the few schools in the United States who gives a Masters Degree in Orthodontics and Dentofacial Orthopedics. Dentofacial Orthopedics deals with early interceptive treatment at the ages 6-8. Dr. Fox has finished over 6,000 cases with most cases having severe

problems. He also is a Diplomate of the American Board of Orthodontics. He accomplished this within 5 years after leaving orthodontic school.

Dr. Fox completed one of the largest research projects (as a Master's thesis) in the 75-year history of the University of Tennessee (it's over 3 inches thick). It was done on the birth defects that can result from taking aspirin or acetaminophen while pregnant. The research was done exactly the way the FDA studies drugs before they are placed on the market. Not only were the findings of the study very interesting and showed growth problems but Dr. Fox discovered a new way to study birth defects that the FDA had not been using.

For his efforts, he received one of the highest research awards given by the American Association of Orthodontists. He was asked to present his research at the Moyer's Growth Symposium at the University of Michigan. He also presented the findings to the annual meeting of the American Association of Orthodontists as one of their guest speakers.



Dr. Fox makes it fun to come to his office. He actually did his own braces after someone helped him to put them on. So, he knows what it is like to have them. All of his staff have or had braces from him. So, they are very effective in communicating with patients about treatment questions. Most moms tell his office how much fun their children have when they come to see him and how they look forward to each appointment with Dr. Fox.

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.

STRAIGHT TEETH is published for the dental community as an educational service. For further information on any of these services, contact:

DONALD M. FOX, D.D.S., M.S.
Adult & Child Braces and Early Interceptive Treatment For Ages 6-11

Diplomate: American Board of Orthodontics
Member: American Association of Orthodontists
Recognized: Who's Who in America
Recipient: Harry Sicher Research Award of the American Association of Orthodontists
Member: Broward County Dental Association

.....