

Really Straight Teeth™

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Inside this Issue

- 1 Fixed Tongue-side Retention Wires
- 1 When is a fixed tongue-side wire indicated?
- 2 What are the different types of fixed tongue-side wires?
- 3 How long does a fixed tongue-side wire need to stay on for?
- 3 About Dr. Fox and his office
- 3 Important Note

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Fixed or Permanent Retainers Wires on the Tongue Side

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Fixed tongue-side wires have been used for many years and are thought of by patients as a means to not have removable retainers. But, to orthodontists, it is thought of as additional retention to be used with



removable retainers.

Interestingly, the fixed retainer wire used in orthodontics is not fully understood. This article will address:

- 1) When is a fixed tongue-side wire indicated?
- 2) What are the different types of tongue-side wires?
- 3) How long do the fixed tongue-side wires need to remain bonded to the teeth?

#1: When is a fixed tongue-side wire indicated?

When trying to hold a finished orthodontic case that had moderate to severe rotations, a tongue-side wire is indicated. Rotated lower incisors at the beginning of treatment are hard to prevent from relapse with a removable



retainer. Lower incisors are so thin in the first place, that they will usually slip at the top of the incisor and then they will overlap with the adjacent incisor. The next thing that occurs is that the upper teeth will start to shift to fit better with the lower shifting teeth.

Another indication for a fixed tongue-side wire is when the case began with moderate to severe spacing in the incisor area. Spaces are hard to close and keep closed in most patients.



A third indication to use a wire is when an upper labial frenectomy (lip



attachment that runs between the two front teeth) was performed as part of the orthodontic treatment. If the diastema reopens after we will need to have to go back into fixed braces to close the diastema.

#2: What are the different types of tongue-side wires?

Which type of wire to use is dictated by the situation or problem the patient presented with at the beginning of

treatment. The best tongue-side wire system is one that is friendly to the gums and bone. To understand this, you should take your fingers and grab hold of either a few upper incisors or lower incisors. Now wiggle them and you will notice they actually move. Gum & bone friendly is a wire that will hold the teeth from moving, yet allow the teeth to naturally move the same amount they would move when they encounter chewing forces. You don't want to lock-in the incisors together and set-up a situation where that all act as one.

The best system on the market is made by Rocky Mountain Orthodontics that utilizes a special wire. The wire is actually made from 9 very small wires that are wound tight on each other.

This allows the wire to be stiff yet flexible. Then, the wire is light cured to the tongue-side of selected teeth with very small tiny pads that lock the wire

to the teeth.

The glue is between the pad and the tooth and not exposed to spit 24 hours a day. The pads are so comfortable that they do not interfere with patient speech or eating. A pad is bonded to each tooth to not allow any intrusion or extrusion of the teeth involved.

Other tongue-side wire systems on the market don't hold up to this system. You don't want to use a flexible wire and then bond a glob of glue onto the back of each tooth without a pad since this usually breaks within one year from the glue having direct exposure to spit 24 hours a day.

Also, you don't want to use a hard wire that bonds only to the tongue surface of the canines and not all six front teeth since will allow rotations of the incisors. Also, the teeth glued at the canines can hurt the bones. The wires on most of these usually are thick and are easily broken when food hits the wire.

The only rigid wire system used by Dr. Fox is the prefabricated wire made by GAC that has small holes in the pads and is only used on the upper central incisors where an upper labial frenectomy has been done. These have a very high success rate of not breaking due their design and the holes in the pads allow the light from the light cure gun to reach all the glue to cure it.

Dr. Fox was the first author in the United States to light cure a lingual wire on a patient. A light cure is a blue light that makes the glue get hard. His article is in the Journal of Clinical Orthodontics in 1987. At this time, he was also working with the first light cure system that would light cure Maryland bridges to replace missing back teeth. At that time, Maryland bridges were being bonded with Comspan and had a high failure rate.

Examples of Before and After Cases Needing Fixed Lingual Retention Wires:

Before: lower spaces



After



Before: upper diastema



After



Dr. Fox was one of the first to prove that the light from a light cure gun actually would cure glue through the entire tooth including molars. He was one of the first orthodontists to light cure brackets to molars. Today, 99% of all his posterior molars have brackets, not bands, light cured to the teeth.

Dr. Fox has also beta tested, along with 5 other orthodontists worldwide, the most recently released bonding agents for bands and brackets today. For 3 years now, Dr. Fox has been using a light cure glue that cures in 10 seconds with a normal light cure gun that he beta tested before it went on the market. He also utilizes light cure glue used in banding bands to molars that cures in 30 seconds.

#3: How long does a fixed tongue-side wire need to stay on?

When a tooth is moved, there are many gum fibers that are stretched that are not just running from the tooth to the bone, but run intertwined to other teeth. Studies of relapse done on dogs over 30 years ago proved that most of the movement occurs in the first 6 months and that there is still potential for other movement for up to two years.

Dr. Fox tells his patients that removable retainers are worn full time for 6 months and then nighttime forever and ever. Teeth that were rotated at the beginning of treatment want to relapse so much that it is a known fact that rotated teeth are aligned first in treatment so that their correction is held throughout the treatment time to give the highest chance of no relapse. But, there are no guarantees. Therefore, a fixed tongue-side wire on lower rotated incisors should remain for at least 5 years. Up to 10 years is not unreasonable with the

flexible wire and pad system discussed above.

A hard wire bonded on the tongue-side of the upper two front incisors after a frenectomy should stay on the same length of time and should be replaced immediately if the patient ever breaks it.

Spaces that were closed usually reopen due to the gum fibers under the surface of the gums are bunched up and just do not reorganize or dissolve away as well as bone does when the teeth are brought closer to each other. The same above time span is recommended in these patients.

About Dr. Fox and his office

Most patients go out of their way to tell Dr. Fox and his staff how comfortable and fun his new office is and they appreciate the care he gives!



Important Note

The adult patient and parent 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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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

Visit us:
www.reallystraightwhiteteeth.com

The Key is feeling comfortable with free Information before you decide!

5 Reasons Why You Must Choose Dr. Fox for Fixed or Permanent Tongue-side Retainer Wires:

1. Dr. Fox treated himself and knows what it is like to be in braces!
2. **Discover How This New Technology Works. Dr. Fox has a Master's Degree in Braces, was #1 in his dental class and has a world research award in Braces given to him by the American Association of Orthodontists.**
3. He creates enough space between your teeth so extractions of permanent teeth become unnecessary in most cases! No one can guarantee that they will all fit, but Dr. Fox will give you the truth.
4. **Eliminate the need for jaw surgery in many patients who have bulldog bites.**
5. **Dr. Fox and his staff explain procedures that makes adults and children feel very comfortable with many stating, "I wish more medical & dental offices explained things like this to me."**

Call my office right now and arrange to get your first visit.

I look forward to seeing you soon,

Dr. Donald Fox



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