Fixed Lingual Retainer Wire
Townies discuss different types of orthodontic retention

**LA Dentist**
Member Since: 08/12/09
Post: 1 of 36

What wire do you use for a permanent lingual retainer? Why do you like it? Thank you. ■ 7/15/2016

**ZZXXZ**
Member Since: 02/28/03
Post: 2 of 36

This is what I do and have done for virtually my entire 36-year career. I’ll let Dr. Zachrisson explain why. Lower 3-3. ■
(Editor’s Note: To view this link, view this message board online) 7/16/2016

**LA Dentist**
Member Since: 08/12/09
Post: 4 of 36

Thanks for the reply. I currently use a wire and bond to each tooth. I’m not a fan of the lingual bar retainers. ■ 7/16/2016

**ahayes**
Member since: 01/20/06
Post: 6 of 36

Charlie, do you use the gold-coated wire? Is there any benefit to the cold coating other than Zachrisson just seemed to really like gold? ■ 7/20/2016

**ZZXXZ**
Member Since: 02/28/03
Post: 7 of 36

I use the gold wire really because Z use the gold wire and I’ve had one patient complain that the gray wire shined through and darkened her lower incisors. That was the reason Z started using the gold wire, and because he just loved the gold effect on Norwegian blondes. I personally think 032 TMA is the perfect retainer wire, especially on teenage boys. ■ 7/20/2016

**JimmyJames**
Member Since: 04/10/12
Post: 8 of 36

What keeps the incisors from getting out of line when you only bond to the canines? ■ 7/20/2016

**ZZXXZ**
Member Since: 02/28/03
Post: 9 of 36

Usually the pressure of the lip against the teeth keeps them straight. Sometimes they move a little and then I use an 8mm diameter disc to polish mesial and distal of the tooth that is moving. Usually this eliminates the problem.
Sometimes (not often) I need to make a clear retainer with pressure on the rotated tooth to realign it. They can wear that clear aligner without having to remove the 3-3 retainer. Seems like a lot of trouble, but I find that the lower 3-3 bonded just to the 3s is hygienic enough to last for decades. I can’t remember the last “bonded to all teeth” that I saw in the mouth longer than five years. On the other hand, I have hundreds of 3-3s out for 20 years plus. So for the long term, I like bonded just to the 3s.
If you achieve normal OBOJ at the end of treatment, the lower 3-3 will eventually serve as the retainer of both the upper and lower teeth. I really like that. I’m in a small town so I see patients every day and their teeth usually look good and they frequently tell me they love their fixed retainer. ■ 7/21/2016

**davidpalmer**
Member Since: 04/14/00
Post: 17 of 36

Back to the OP’s question. Dead soft braided wire conformed carefully to 22-27 by taking a quick impression and pouring a model. Then a little composite on each tooth. Yes, it’s harder

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to clean but it prevents the inevitable minor shifting of the lower incisors that mom and patient (especially girls) notice in an instant and want corrected. Not sure how xzzxxz keeps perfect alignment on lower incisors without bonding them to the wire.

As far as retention of the lower anterior teeth, I learned that fiberotomy helps in the retention process. Of course, a retainer (e.g., Hawley, Essix) or fixed retention (i.e., lingual bar) is needed as well. Has anyone ever done fiberotomy? Do you think it works? What kind of retention do you use after the fiberotomy?

I've seen published material saying it makes a difference to the upper anterior teeth but not to the lower. Not sure why there is a difference. The lingual bar is a superior choice for lower retention except in the following situations:

1. I've extracted a lower incisor
2. The patient started with lower anterior spacing. If the lower incisors relapse, they will move forward
3. If the patient, especially an adult, started with severe lower crowding or rotations.

In all other situations, I will use a bar attached to all front teeth, canine to canine. The wire is whatever your preference is, but cemented only to the 3s. It needs to be bonded with something other than a flowable composite. I like Transbond LR, which is very strong and has only a small amount of flow.

As someone pointed out above, removable means just that. I don't expect patients to wear removable retainers long term. Somedobutmostdon't. You can say what you will about making patients accept responsibility for long-term retention, and while that might be true legally, it does not help your practice's reputation if the teeth move because of failure to wear upper and lower retainers. Other potential patients will look at those teeth and wonder why they should spend the money if the teeth will not be straight long term.

My goal is to finish most patients with normal OB OJ. If I can achieve that, the lower fixed retainer holds it all together after the first year's settling has occurred and the patient has stopped wearing the upper removable. There are exceptions, like midline diastema, that need their own fixed retainers, but in general the lower 3-3 holds it all together long term.

For that reason, I think a bar is a far superior retainer than wire attached to each tooth. I've seen very few wires last long term. On the other hand, I've seen a lot of long-term bar wearers out there. The wires bonded to all teeth either get loose once or twice and the patient decides to have it removed, or it gets loose on one tooth and the tooth moves before the patient is aware of it. That kind of thing usually does not happen when it is bonded just to the 3s. If it gets loose, the patient knows it right away.

If you are going to use a bar, it has to be contoured to touch each lower tooth. This means an impression has to be done. It can't be contoured chairside.

Do individual teeth sometimes move? Yes, but usually not much. If I see one start to move, I will take a small 8mm diameter diamond wheel and polish the contact on both sides. That seems to reduce movement tendencies. If movement is significant, I can make an Essix-style retainer with pressure on one tooth to move it back into place. You do not need to remove the fixed retainer to do this. In those rare cases where I have to do an Essix, I will occasionally bond the rotated tooth to the bar on a short term (six-month basis).
[posted 7/25/2016]

One more comment: Despite using a fixed retainer, the forces that we are trying to defeat are still active. This means that there is a loss of arch length with age. Do the lower front teeth move backward? Do the lower molars move forward? Who knows; who cares? Those forces are still active, though, despite the best retainer system.

I like to leave the fixed retainer on until patients start looking at nursing home brochures. They don’t always do that and sometimes I do remove the fixed retainer. I always use a thin diamond wheel (0.14mm) and break contact from mesial of 3 to mesial of 3. This seems to make a big difference in how stable the teeth are after fixed retention removal.

If I was using a removable retainer, I would periodically do the same thing if I noticed a little bit of movement of if the contacts were tight.

LA Dentist, cowdr, JimmyJames, ncobb and davidpalmer: I’ve been in the exclusive practice of orthodontics since 1999. From 1999-2002 or so, my retention protocol was either U/L Hawley retainers or U Hawley and L 3-3 fixed lingual, bonded usually only to L3s but once in a while to all six lower anterior teeth.

I typically based my decision on L Hawley or L 3-3 fixed on the amount of pretreatment crowding and/or how much difference there was between pretreatment and post-treatment intercuspid widths as measured from cusp tip to cusp tip of LR3-LL3. If I expanded intercuspid width by more than 1–2 mm, I would tend to use a lower fixed lingual retainer.

TN Doc: I followed all my retention patients indefinitely. That is, my door is never closed on them, and I never charge for retainer checkups no matter how long they’ve been out of treatment. After deband, I see them at six weeks, three months, six months, six months, six months, then yearly until they decide not to come back.

Everyone: I noticed that with my retention patients who were prescribed Hawley retainers, lower anterior relapse was much more prevalent than those who had a lower fixed. Based on my own empirical findings corroborated by refereed orthodontic research, I decided in 2003 to go to lower fixed in 95 percent of cases. The only exceptions were patients who tell me they won’t floss, or the parents and/or the patients request removable retention.

I won’t try to convince you that a lower fixed lingual retainer bonded to only L3s combined with an excellent posterior interdigitation and proper anterior coupling is the best method of retention there is. I have done my fair share of lower lingual retainers bonded to all lower anterior teeth and have seen many placed by other orthodontists, and I can assure you that flossing is all but impossible.

As to my credentials, I have been in practice for 17 years and have treated more than 8,000 cases. I’m a diplomate of the ABO and an affiliate member of the Angle Society of Orthodontists. I used to teach at UCLA, albeit very briefly and did not win any teaching awards like Dr. Ruff (I don’t have his dedication, teaching talent or time.)

These four patients below are consecutive retention patients who I saw in the past three clinical days, and they have been out of treatment from 18 months to over five years. Some of them still have an upper removable retainer, while others “left them at home.” For each case, I include the deband photos, the current retention photos, and an untouched close-up mandibular occlusal view. I will let you all draw your own conclusions as to the effectiveness of the lingual fixed retainer bonded only to L3s.

P.S. To Dr. Ruff, I choose a mesh-pad stainless steel design instead of an .032 TMA, mainly because I think it is easier for patients to use just regular floss to thread between L3-L2. With your TMA design, do your patients have to use floss threaders, or perhaps Superfloss?
1. Three years and eight months out of braces.

2. Four years and eight months out of braces.

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3. Five years and two months out of Invisalign.

4. 18 months out of braces.

Your cases look really nice. Have you ever had any of the 3X3s not work and one or more anterior teeth shift or rotate? If so, what do you do then?

Every once in a while, I do see my cases with some anterior relapse. I usually follow the same protocol that Charlie spoke about in an earlier post in this thread, but instead of using a diamond disk, I use a diamond strip in a straight, seesawing motion to create a flat, broad area of contact. Then, I use elastic thread and lasso the offending tooth to the fixed lingual retainer, and see the patient in two weeks to take impression for an Essix overlay retainer.

Maybe I was just lucky to have four consecutive retention cases show up in my office with virtually no relapse. I’ll post more if there’s interest. I’m here to learn from my GP colleagues too, so if you have cases to teach me, I’m all eyes and ears. And if I can share something, I shall!

You have to understand there are differences between general dentists doing ortho and real orthodontists doing ortho.

The biggest difference is we are better looking than you guys. The second difference is in how we are judged. For instance, you do an ortho case and you have to keep the patient happy. Maybe a removable retainer is enough. If they don’t wear it, it is their fault. If your patient is a teen, mom is also effectively a client. You can say all you want about “Mrs. Smith, it was little David’s responsibility to wear the retainer. I’m sorry that he didn’t.”

Mom may respond with something like, “I just spent $6,000 for nothing?” How many referrals from the soccer booster’s association do you think that mom will send you?

In my case, I also have to keep the referring dentist happy and probably a couple of his
RDHs. If the lower teeth start to move, the RDH is not going to think “Gee, bad patient.” They are going to think “bad orthodontist.”

There is no perfect retainer, but for my class of patients, especially for teens, they like fixed retention. I’ve had one RDH tell me that my cases at 10 years look like other people’s cases at six months and that was why she brought her two kids to me. Why do my cases look so good? Because the kids have never stopped wearing their retainers. They had no choice. It wasn’t something magic in my braces.

For those of you in the Damon world: I would hate to try and keep all of that stable, the expansion I mean, without fixed retainers. So if I have a little bit of lower movement, it is relatively simple to fix it. I look at it as part of my marketing budget. Sorry, that’s all I have time for. I’m having lunch with two referring docs tomorrow and I need to look like a specialist. So I’m off to have my hair done. ■

Zxxzx, love your humor! I also love fixed retainers. I think I’ll try stripping slightly to flatten the contact points next time I have a little movement. ■