

Pre-adjusted
lingual appliances
- the era of invis-
ible braces is here



Lingual appliances Revolution for adult orthodon- tics

Gone are the days of “metal mouth” braces. The Lingual appliances were originally invented by a Beverley Hills orthodontist Dr Craven Kurz. Despite initial enthusiastic reception by US orthodontists in the early 1980’s, the appliance failed to be widely accepted by mid 80’s. There were many reasons for this failure:

i) the appliance was released too early with little testing

ii) the direct placement of brackets onto the teeth was inaccurate

iii) the mechanics were not directly compatible with those of the traditional labial technique.

Most orthodontists who tried the original Lingual appliance not only abandoned the technique, but vowed never to use it again. There was a handful of orthodontists worldwide who persisted to refine the technique and solve many of the original shortcomings of this appliance.

Today’s Lingual technique can offer the same results as traditional labial braces. The types of malocclusions that can be treated with Lingual appliances are not restricted to just a few straight forward mild crowding cases but can be applied to cases with deep over-

Our practice is about to celebrate its 13th Birthday. Thank you to all who have supported us and shared our amazing journey!

Alex Yusupov

bites, crowding with and without extractions as well as surgical and multidisciplinary cases.

I have been offering Lingual appliances to my adult (and some adolescent) patients since 2000. While the learning curve initially was very steep, with careful planning and persistence, I have found this technique to be a real aesthetic alternative to conventional braces. I would like to present a range of cases that have been treated using Lingual appliances

Lingual cases simple case

This patient (SH) was referred to me by a prosthodontist to re-arrange spaces in the upper and lower anteriors to facilitate new veneers.



Conventional appliances were used to redistribute the spaces.



After veneers were inserted, there was some space re-opening between the 11 and 12.



To prevent damage to the new veneers, 4 lingual brackets were used to close the space in 1 month.



The final positions of the teeth is now maintained by a bonded permanent retainer.



How many of your patients would benefit from minor orthodontic tweaking?

complex treatment



This patient (ME) was referred for correction of his deep overbite. As a child, ME had orthodontic treatment with removal of upper first premolars

The ability of Lingual Appliances to correct deep overbite rivals the Labial appliances. This is because Lingual brackets have a built in bite-plane, which acts to intrude the incisors during normal function.

The photos below show ME six months into treatment.



With correction of the upper incisor torque, the old extraction spaces opened up, and were subsequently closed.



Lower lingual appliances are technically difficult, but not impossible

The final result 12 months after the start of treatment. Another happy patient who did not display braces during treatment.



The speech gets very affected with Lingual braces on upper and lower teeth. One of the reasons why we prefer not to use Lingual braces in the mandible.

Orthodontic/surgical/ restorative treatment

Orthognathic surgery is not a contra- indication for Lingual orthodontics. As a rule, I prefer to use Lingual braces on the upper teeth, and clear labial braces on the lower teeth.



This patient presented with a Class II div 1 malocclusion with 4 premolars extracted in the past. She also had uneven and moderate wear of the upper anteriors.



The treatment plan involved:

- Pre-orthodontic composite build ups of the upper anteriors.
- Lingual braces on the upper teeth and clear braces on the lower teeth.

- Jaw surgery to move the lower jaw forward.

- Crown lengthening surgery

- Permanent restoration of upper teeth.



After upper build ups the Lingual braces were fitted to the upper teeth.



Pre-surgery - the upper teeth and lower teeth aligned and the angulation of the teeth de-compensated.

The Lingual appliances required quite a lot of wire bending to correct the positions of the teeth - that's what orthodontists are good at!



After surgery, before removing appliances. Note the excessive amount of gum display. This was not due to skeletal excess of the upper jaw, but rather due to short clinical crowns of the upper teeth.



PSSS the braces are still on!

After the braces were removed, the patient had gum lifting with a periodontist. This was then followed by veneers on the upper 8 front teeth.



The final profile shows a balanced, beautiful face.



The final smile - the patient is delighted not only by the fact that she has achieved such a terrific facial and dental aesthetic result, but also because during the treatment, she did not display her braces.



Clinicians involved in this case:

- orthodontics - Dr Alex Yusupov
- surgery - Mr Andrew Bridgeman
- perio surgery - Dr Basil Fletcher
- restorative - Dr George Paltoglou

Lingual Appliances

Patient management

Prospective patients need to be informed of how to cope with Lingual braces. Some of the important issues are discussed below.

Speech

Speech is the most impacting difference. The Lingual braces are positioned on the tongue side of the teeth, and thus affect speech, at least initially. The original Kurz bracket by Ormco (see cover photo) is the benchmark appliance.



Newer appliances have reduced the impact of lingual braces on speech. The most recent addition to bracket line up is the StB bracket (also by Ormco). This bracket is 30 to 50% smaller, and in my patients, has caused little if any speech interferences.



The developments are continuing in the design of the Lingual brackets. The Lingual orthodontists are eagerly awaiting the release of the self ligating lingual brackets, which should happen later this year.

Oral hygiene

Oral hygiene is similar with Lingual braces, provided that patients brush between the bracket and the gingiva. We recommend Oral B Professional Care center with Oxyjet. The pumped, pulsating water jet is a great way to remove food from appliances.

We show our patients how to floss. With lingual braces, patients can use standard floss and while flossing is initially tricky with either Lingual or conventional braces, most patients do an excellent job.

We also stress the need for our patients to see their dentist every 3 months if they have Lingual braces.

Food

As with all braces, we ask our patients to avoid hard, sticky, chewy foods. Carrots and apples need to be cut into small pieces. We also ask our patients to cut up their meat, at least at the start. With Lingual braces, staining of braces is not a problem as it is with clear braces, which stain yellow/green with curry, and brown with red wines. Once again, after initial few days, patients cope extremely well.

How much?

Lingual braces cost more than conventional braces. In our practice, the cost for upper Lingual braces and lower conventional clear braces is in the range of \$12000 - \$15000 depending on the severity of the bite problems.

Usually, the fee is divided into a \$3000 deposit payable at the start of treatment, and then monthly payments of between \$300 and \$500.00.

Be part of the Lingual Revolution!

We hope that this newsletter has been helpful. If you wish to have more copies sent to your practice, or if you want to discuss application of Lingual technique to your prospective patients, then please don't hesitate to call:

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