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The Art & Science of the Smile

Hidden Lingual “Invisible” Braces

Patient before and after first 6 Months Treatment

\$270,000,000 is what **3M™** reportedly paid for Incognito™ (iBraces™) - two sister lingual orthodontic labs - in September 2008.

That was after the global financial crisis began. Incognito™ is the world's most popular lingual braces system, according to Dr Dirch Weichmann, its originator. Weichmann created this variant of the lingual system. He branded it and then set forth to train hundreds of orthodontists, including me, to use it – with great success. We've been doing lingual braces for over 8 years and Incognito™ is fantastic – a very huge forward. If investment price is any indication, **3M-ESPE**, believes the future of lingual braces very big indeed.

Invisible Braces - Fiction or Reality?

Lingual braces were born in the '70s. Excitement and promotion occurred well before their use was understood. So disillusioning results soon led to their sidelining. But the visionaries and inventors - those who never give up - just kept working. Today we have several really excellent systems that came via different development streams. In Asia, Europe, Australia & North America we have had a small number of lingual-only orthodontists, each with over 20 years of experience who are passing the knowledge into mainstream teaching. Now every big orthodontic manufacturer produces lingual brackets. Also increasing numbers of postgraduate programs teach lingual. There is a master's degree at Paris VII University. World lingual orthodontic meetings attract well over 500 doctor delegates, nearly double normal Australian meetings. There is huge interest.

Why the resurgence?

New manufacturing systems have improved the complex, labour intensive lingual fabrication procedures. We now have steps that are precise predictable and easy for the orthodontist. Really excellent results are consistently produceable. Lingual braces can even deliver better outcomes in the right cases due to superior mechanics and stronger anchorage.



Patient demand for invisible braces has always been very strong. Ask your patient would they be more inclined to have straight teeth if they could have invisible braces.

How does Technology Help?

The “set up” for lingual braces is vastly more complex than for normal braces. It requires a very specialised and skilled lingual orthodontics laboratory, of which there are few in the world. We are fortunate in Melbourne to have an absolutely world-class lingual set-up laboratory performing at the cutting edge of all technology. It is Ari Sciacca's Archform Laboratory, who export their work all over Asia and to Europe. The latest developments have been computerised custom bracket making for individual tooth surfaces. We also have robot-made wires in some systems. But even without robots, we have fantastic analogue wire making. We orthodontists are pretty good “robot” wire benders.

Increased Skill Set

There is now a 30 year knowledge base in lingual orthodontics and of course much better communication exchange. The subspecialty has obtained critical mass.

Benefit to Mainstream Orthodontics

With our adoption of SureSmile™ technology, labial and lingual cases are offered by Dr Wexler using 3D treatment-target modelling. We scan our patient's teeth, intra-orally or with iCAT x-rays. Then, using in-office software entirely operated by the orthodontist, the doctor controls very sophisticated and complex robot arch-wire manufacturing. Lingual orthodontics has been done for decades without computers, using plaster treatment-target models. Now, with computers and the internet, robot-made wires are available for nearly all cases. The computer modelling systems show all stages of planned tooth movements. These systems surpass the sophistication used by Invisalign's Clincheck™ and are used in several proprietary systems such as: SureSmile™, Insignia™, Orapix™ and others.

Patient before and after first 6 Months Treatment

What about Invisalign™

Invisalign™ is good for class I cases with mild-to-moderate crowding and with limited correction of inter-jaw discrepancies. In simple cases it delivers excellent results that are indistinguishable from braces. It is lovely for the patient to wear compared with braces.

However, Invisalign™ has many limitations. Inability for extraction cases, poor grip on teeth with small crowns, zero control on un-erupted teeth and zero control on erupting teeth or intruded crowns. Invisalign™ struggles with labio-lingual incisor crown torque, mesiodistal incisor tipping and intrusions. It is useless for canine impactions which is about 15% of orthodontic cases in most clinics.

High Speed Lingual Treatment

Lingual braces very quickly align imbricated incisors In "social six" cases, much faster than any system of sequential plastic aligners. This is because lingual braces use very springy super-elastic titanium wire to move teeth in one continuous sweeping motion. NiTi wires have a very large amount of stored energy and a very large range of action between adjustments. NiTi delivers low, continuous, biocompatible forces. This force system is the most efficient & the safest way to move teeth and is understandably better than the very small 0.25 mm steps or the 2° rotations that are expected, but not always delivered, with fortnightly aligner changes.

Lingual Braces have True Invisiblity

Invisalign is hard to see but is not truly invisible, like hidden braces.



Dr Wexler provides high quality orthodontic treatment including lingual concealed braces at Toorak & Frankston

The images in this newsletter were taken before treatment and after the first 6 months. Orthodontic patient images in this newsletter were provided with consent.



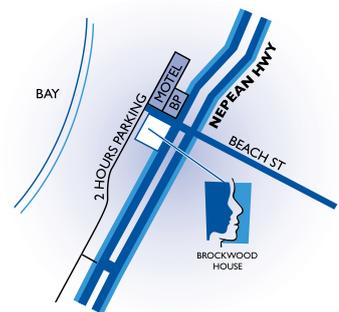
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Light blue indicates parking, but read restrictions before leaving your car



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