

Comparison of Ceramic, Lingual, Self-Ligating Invisalign with Traditional Metal Braces

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ABSTRACT

Background: In this article, a comparison of different types of Orthodontic braces used for treating Orthodontic problems were discussed including their advantages and disadvantages.

Keywords: Metal braces, Ceramic Braces, Lingual Braces, Self Ligating Braces, Invisalign.

INTRODUCTION

Today's Orthodontics offers more kinds of braces than ever before. When it comes to Orthodontic treatments, there are lots of different options to choose from. The five most common types of braces used are, Metal Braces, Ceramic Braces, Lingual Braces, Self-Ligating Braces, Invisalign.

Metal Braces

Metal Braces also called as "Traditional Braces", have two basic components¹, these are the metal bracket that are applied to the teeth and the bendable metal wire that is threaded through the brackets in order to apply pressure to the teeth and ultimately move them. They are the least expensive and are often the fastest way of moving the teeth into their ideal location. In the past, the brackets and wires used for metal braces were very noticeable and were annoying to the patients because of their size and intrusiveness. Today's metal braces are far similar and less noticeable than they were in the past. New techniques have also created wires that move teeth faster and with less pain than in years past.

Ceramic Braces

They were once a very popular alternative to metal braces because the braces were made out of ceramic material that is in the same colour and has the same texture as teeth, it would be very difficult to see the ceramic brackets on the teeth and as the wires used on them were also transparent and less noticeable than metal braces and they were in high demand.² They are more expensive than traditional braces, they are far less noticeable and offer the patient a faster treatment that can be found with treatment like Invisalign.

They had disadvantages like getting easily stained if the patients were not diligent and stick to their cleaning schedule, and the ceramic braces and metal wires often had the same level of discomfort as traditional metal braces.³



Fig 1: Ceramic braces.

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Lingual Braces

Essentially it is, the same as metal braces, except that they are on the inside of the bite, they provide a number of benefits. They are as effective as traditionally placed braces, whether metal or ceramic, are not visible much and they are far less intrusive and likely to be noticed. The advantages of lingual braces include, they are completely hidden from site. They can be used to treat majority of problems. The disadvantages of lingual braces include, it is very difficult to keep them clean, difficult in talking and cannot be used for severe orthodontic conditions.⁴ The treatment duration period is also longer and more expensive than traditional braces, so most patients do not opt for this type of treatment. It requires a high degree of skill and specialised materials and are more expensive.

Self Ligating Braces

Similar to traditional metal and ceramic braces, they make use of the bracket and wire system. This may be the type of braces that most Orthodontist use today. This type of braces uses bracket with clips that hold on the wires, instead of the rubber band tie system. These brackets are supposed to hold on to less food and be less painful than other types of braces and they are also supposed to reduce the number of appointments to the orthodontist, that the patient has to make.⁵ This type of braces are found in both metal and ceramic versions. They use clips instead of elastic bands to hold the brace's wire in place. This creates less friction and makes it easier for brushing around the braces and keeps the teeth clean during treatment. Its advantages include it can be used effectively to treat simple or complex problems, precise results can also be achieved.



Fig 2: Lingual braces.

The disadvantages include, clear self ligating brackets are not completely hidden.



Fig 3: Clear self-ligating brackets.

Invisalign

Invisalign is the most common and the most effective system of invisible aligner braces. They are not ideal for every patients, but they provide a number of benefits including, the ability to completely remove them during treatment to clean the teeth and align when necessary.⁶ They are essentially invisible and once the patient is used to wearing them, they are more comfortable than metal braces. Advantages include they can be easily removed for eating, drinking and teeth brushing. It's very inconspicuous. Clinician will be able to show a digital representation of how our teeth should look once the treatment is completed. Disadvantages include, it is more expensive than traditional braces and can't be used for severe orthodontic conditions.

It does however make a great choice for those who want a more flexible treatment for fairly standard alignment issues.



Fig 4: Invisalign.

CONCLUSION

It's never too late to take the first step towards a more confident smile. You just need to decide which type of braces will suit you best. This probably comes down to a balance between price, comfort, appearance and results. In Summary we can say that, most teens and adults would prefer to avoid the train track metal braces look. Ceramic braces

are less obvious than metal braces, but only from a distance and can be just as uncomfortable.

Lingual braces have the invisibility factor, but are very expensive. Invisalign offers most comfortable, affordable and efficient treatment results, but can be used in minor malocclusion problems only. So according to the patients compliance and severity of malocclusion, one has to select the appropriate braces and treat them ideally.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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