

## ADG Treatment Guide - Consent to Invisalign Treatment

### What is Invisalign?

Many patients seek to straighten their teeth without going through the traditional brace process using unsightly metal fixed braces. Invisalign is an orthodontic treatment technique using a polymer based clear brace system. The brace system looks like a small mouthguard that is called an 'aligner'. The Invisalign system relies on a fabrication of a multitude of aligners, each with small pre-programmed tooth movements carefully engineered into the aligner. Each aligner is worn for 7-10 days to achieve the small pre-programmed tooth movement. By going through the prescribed sequence of aligners, you will be able to gradually straighten your teeth according to the treatment plan.



For some treatment plans, it is more mechanically effective to undertake movements with Invisalign when there are small resin 'handles' placed on the surface of the teeth. These composite 'optimised attachments' serve as mini handles to help the resin-based aligner system grab hold of the respective teeth within the aligner.

### Benefits of Invisalign Treatment

Orthodontic treatment can range from simple cosmetic of the front teeth, which takes a few months to complex bite correction which can take 1-2 ½ years. Invisalign has the capacity to work at different levels of sophistication between more limited cosmetic tooth alignment to full bite correction. When embarking on a long brace treatment, the prospect of wearing the usual metal hardware for 1-2 ½ years is extremely unappealing and sufficient to put anyone off having brace treatment at all. The personal benefit and enhancement in self esteem of possessing a beautiful smile is priceless. Invisalign clear aligners are comfortable and discreet and affect lifestyle minimally. That means that Invisalign treatment can continue in the 'background' of your life without the pressure of needing to culminate treatment quickly and accepting a compromise outcome. As a result, the aligners can continue to achieve the smile you desire without the usual self-imposed time pressure to complete treatment when a metal fixed brace is in place. For most cases, this will allow culmination of treatment to a better standard.

As the Invisalign 'aligners' are removeable, it is also easier to brush your teeth and maintain the health of the gums than you will be able to if you were wearing a fixed brace. It is also possible to use the aligner as a 'reservoir tray' to hold medicaments to strengthen the enamel surface. Such products include 'Recaldent', and fluoride-based products.

### Limitations of Invisalign Treatment

Invisalign aligners are not as mechanically efficient at moving teeth as fixed appliances are. For complex movements Invisalign will not successfully achieve alignment correction. Precision of tooth movement is worse for smaller teeth, such as the lower teeth. Alignment correction is more challenging for smaller teeth when using the Invisalign system. The larger anterior teeth are more readily and precisely moved with the Invisalign system.

### Composite buttons as 'handles'

To ensure that Invisalign aligners grab your teeth effectively we will need to bond small inconspicuous white buttons on your teeth. The diagram below shows these as small pink buttons. This is only to highlight their size and shape. They are actually white and blend into the background colour of your teeth.



**Black triangles – early decisions to avoid added costs.** When adults seek correction of dental crowding, the crowding itself masks the effects of several years of gum disease. So, when the teeth are fully straightened, the gum recession becomes more obvious and this may reveal some areas of subtle 'black triangles' between the teeth, or asymmetry in the apparent height of the gums between left and right sides of the jaw. Some patients think that the recession was caused by the Invisalign treatment. This is not correct. You should discuss the possibility of seeing these 'embrasures' or 'black triangles' between your teeth which is dependent on the extent of past gum disease and how animated your smile is.



The effect of these 'black triangles' can be reduced by slight slenderising of your teeth early in your treatment. If you think the above appearance may concern you, please do discuss this with your Invisalign practitioner. An early 'slenderisation' procedure will save additional treatment later and added costs to your Invisalign treatment.

**Difficult tooth movements.** Invisalign is an excellent brace system but it does have limits. Sometimes Invisalign is not successful in rotating small teeth which are crowded because Invisalign has so little purchase on such teeth. If you think that you will be very fussy about

small rotations, then you may need to budget for a brief period with a fixed brace. Your dentist will provide you with details and costs if applicable.

**Need to move to a fixed appliance.** As mentioned before, some Invisalign tooth movements are very challenging because Invisalign has some limitations. For the challenging bite, we will seek to complete most of the large movements in Invisalign but do a period of refinement with a ceramic fixed brace. Please be aware that provision of a fixed brace will incur additional cost.

The clinician will make the assessment on whether they can achieve the desired tooth movements to a satisfactory outcome with the Invisalign system only, or whether you are better treated in the hands of an orthodontist due to the difficult bite and limitations of the Invisalign system.

### Different Options with Invisalign

There are several Invisalign options that will be discussed with you:

- Invisalign Go
- Invisalign Teen
- Invisalign Full

All the Invisalign systems look the same – a very thin clear, and nearly invisible mouth brace. The different systems however have different sophistication and ability and so are costed differently.

If you are seeking only cosmetic tooth alignment without a need for bite correction, you may be suited to be treated with the Invisalign Go system. This clear brace option lines up the front 10 teeth. The key benefit to this system is that treatment can complete within a matter of a few months with very economical cost and is a good quick tooth alignment system.

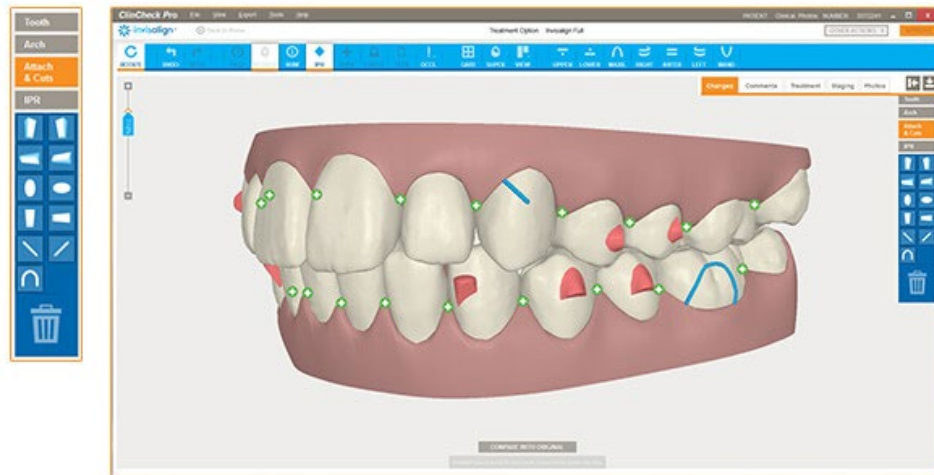
Some teenagers refuse to receive the recommended metal brace to straighten their teeth. Invisalign Teen is a nearly invisible brace option to motivate the child to consider the benefits of early teeth straightening. Your Orthodontist will provide more details about how the Invisalign Teen system works.

Invisalign Full is the adult ‘nearly invisible’ brace system and is design for adults who have no desire to receive metal or ceramic bonded attachments to the teeth. The system treats cosmetic tooth alignment and treats the full bite notwithstanding the limitations of the Invisalign system mentioned above.

### The treatment plan ‘visualiser’ – the Clincheck

Your dentist is approved as a certified Invisalign user. Every Invisalign user has their personal portal where patient plans are devised, sent to Invisalign and are archived. This portal contains all the 3D plan visualisations which essentially present as a scrollable sequence of aligners and a separate 3D visualisation of the treatment effect. The 3D visualiser is known as the patient ‘clincheck’. Any modifications to the plan are to be narrativised within the Clincheck by the Invisalign practitioner and sent back to Invisalign to create the changes which are presented in the 3D visualiser as the updated Clincheck within the Invisalign portal (shown below).

where



account

Orthodontic plans are prescribed, modified and updated within this portal by the clinician who is treating you. When the definitive plan is complete and this can be visualised as the updated Clincheck, the clinician can show this to you for approval before fabrication of the aligners. You will also see and understand the tooth movements planned. You can also endorse the plan and make requests for changes before this is accepted for manufacture of the aligners.

### The appointment sequence

Every Invisalign treatment involves an appointment sequence that is like that listed below:

**Appointment 1.** After your dentist has undertaken a thorough orthodontic assessment and checked your gums and teeth for the absence of tooth decay and gum disease, he/she can then carefully plan for cosmetic tooth alignment with Invisalign. A thorough diagnosis is undertaken. The clinician will assess suitability for Invisalign and then book you in for your records-taking appointment.

**Appointment 2.** This is a records-taking appointment. These records may involve additional bespoke orthodontic X rays. They will certainly involve attaining photos, and study models and setting up the Clincheck on the Invisalign portal. The Clincheck set-up usually occurs on the same day, and high-quality impressions are taken to commence scanning and manufacture of the aligners. The high-quality impressions are sent to Align Tech (Invisalign) for scanning in and setting up the 3D visualisation on the Invisalign portal. The portal is updated with the patient's photos and tracking number. Align-tech will then scan the impressions and set up a Clincheck for the clinician to review. The clinician will study the 3D visualisation to ensure that it contains all the relevant pre-programmed tooth movements. The clinician can narrativise any additional changes within his/her portal and the 3D visualisation is changed accordingly after resubmission to Align Tech. When the clinician is satisfied with the Clincheck and proposed tooth movements the plan is accepted, and this results in manufacture of the requisite aligners.

**Appointment 3.** The patient is usually presented with the first aligner of the sequence to get used to the Invisalign system.

**Appointment 4.** This visit is usually for the 'attachment template' The attachment template is a carefully moulded set of upper and lower jaw aligners with calculated positions for the composite attachments. There are small reservoirs/dimples within the attachment template,

within which can be inserted some uncured resin. The template is then seated home and the 'optimised attachments' can be thoroughly cured through the transparent aligner. The 'optimised attachments' will serve as effective handles to aid tooth movement in the aligners. The patient is then given a sequence of several aligners to be able to changeover each aligner at 7 – 10-day intervals to commence and facilitate prescribed tooth movements which were designed into the Clincheck. Your Invisalign provider then will set up some review visits to assess the success of tooth movement and provide you with additional aligners of the sequence.

### Interproximal Stripping versus extractions to create space with Invisalign

As part of the approved treatment sequence your clinician will have undertaken some space management planning in the case of a crowded mouth. Space management in any orthodontic procedure occurs by 'expansion' of the arch of the teeth, removing 1 or more teeth or alternatively carefully slenderising several teeth and gathering the cluster of slenderised teeth and managing the space accordingly. The space management strategy will be determined by a thorough evaluation of your Clincheck.

It is less common to extract teeth when using the Invisalign system, but extremely common to slenderise groups of teeth to facilitate space management. 0.2 – 0.4 mm is slenderised from several tooth contact points, and this can create space of up to 4 mm in any single jaw. This may be enough to achieve cosmetic tooth alignment in mildly crowded mouths.

### The 'Acceledent'



The Acceledent is a device with a mouthpiece that vibrates and sends carefully calibrated micro pulses to the aligners. The aligners then seek to seat more effectively, and the micro pulses are transmitted to the teeth and bone. This vibrational effect is thought to enhance the rate of tooth movement. There are advocates and detractors for this technology. The device needs to be applied to the teeth for approximately 20 minutes per day to achieve the desired effect.

The device can be connected via blue tooth to your phone and the Acceledent dashboard will then provide you with a schedule of use including duration and time. This will be useful information for the clinician looking after your Invisalign care. The Acceledent device is an additional item that is charged to you at cost and will help complete your Invisalign treatment more swiftly.



### **Invisalign Straightening when you have hypomineralised teeth or have suffered from decay in the past.**

Some individuals have small marks on their teeth known as hypo-mineralisation. In this condition the enamel is softer and the chance of damage to enamel is increased when a fixed metal brace is contemplated. Some patients have also had a history of decay in recent months just prior to considering Invisalign treatment. If your diet is not adequately controlled and there is frequency of snacking of sugary snacks/beverages then there is a real prospect of suffering from enamel demineralisation, break down and cavitation of teeth when using a fixed brace. This dilemma is avoided with Invisalign. The aligners can be readily removed to facilitate cleaning of the teeth. What is more, the aligner can be used as a reservoir tray to feed products to the teeth to harden the enamel. One product that we endorse is MI paste. This is a mousse which contains tricalcium phosphate/amorphous calcium phosphate and fluoride and is part of a range of tooth enamel hardening products called 'Recaldent'. The combination of these items results in a supersaturated medium surrounding the teeth which promotes remineralisation and hardening of the enamel surface. As such, the aligners can be used as a therapy that will support strengthening the teeth rather than present as a risk for causing enamel damage.

### **Professional Tooth Whitening**

Many patients who seek tooth straightening see the value in professional whitening at the end of the cosmetic tooth alignment procedure. Professional tooth whitening can produce a dramatic smile enhancement especially if the teeth are now straight. If you have hypomineralised teeth, we will recommend use of a professional whitening product with a Recaldent product. Please ask your dentist about your suitability to receive professional tooth whitening while you wear your Invisalign aligners.

### **Long term retainers**

With all orthodontic treatment there is a need for a 'retention period' of a minimum of 1 year after your tooth straightening phase is complete. This retainer is worn at night and needs to be passive and not encourage any tooth movement. The reality of course is that the teeth will move throughout life and a successful outcome can be protected by lifelong wear of retainers.

This can be by means of a removable retainer which is periodically replaced. Each removable retainer can last 12-18 months and will need replacement at further cost. Alternatively, for some patients who tire of the need to constantly remember the need to place their retainer at night an alternative strategy would be to bond a very flexible piece of wire to the back of the teeth. These typically last approximately 5 years and are available at additional cost after the active alignment phase is complete. Repairs, and periodic replacement of the wire

### **Vivera Retainers versus traditional retainers**

At the end of treatment, there will be a need to wear a retainer at night. We will provide a standard retainer for night-time at no additional cost. Align Tech however produces outstanding removable retainers which are far superior to the retainers that are made in a traditional lab. Align Tech charge a flat rate for production of 3 sets of aligners. These are called 'Vivera retainers' You are free to request a set of Vivera retainers at the end of treatment and these will be charged at cost to you. These are far superior to the traditional retainers made in a lab.

### **Permanent bonded retainers**

Some patients will not have the patience to remember to wear their removable retainer every night and seek a more permanent form of retention. In this instance, it is possible to bond a small flexible wire to the backs of the lower teeth to achieve the desired long-term retention. These permanent bonded wire retainers can typically last for approximately 5 years and may need periodic replacement. The resins must be placed very carefully to enable good oral hygiene and cleaning around the permanent bonded wire. As mentioned above, these retainers need periodic replacement and are chargeable.



If you have any more questions, please do speak to your Invisalign practitioner who will ensure that you fully understand the treatment that you are embarking on.

I confirm that I have read and understood the information contained within this guide, and I have had the opportunity to ask questions. I feel that I understand the risks, benefits and limitations of the procedures described, and I understand that no promises or guarantees of the proposed outcome can be made. By signing this form, I am providing my explicit consent to render necessary treatment to assist my dental condition.

Name of Patient \_\_\_\_\_

Date of Birth \_\_\_\_\_

Patient signature \_\_\_\_\_ Dated \_\_\_\_\_

Parent/Guardian/  
Legal Representative \_\_\_\_\_ Dated \_\_\_\_\_