

Really Straight Teeth

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South Florida's Full Service Orthodontist



Invisalign Clear Trays

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Invisalign is orthodontics without braces using clear trays. It uses computer 3-dimensional graphics technology that gives a different method to move patient's teeth from point A to point B.



Interestingly, Invisalign used in orthodontics is not fully understood. This article will address:

- 1) When is Invisalign indicated?
- 2) When is Invisalign not indicated?
- 3) How to treat unusual cases with Invisalign?
- 4) How to refer a patient for Invisalign?

#1: When is Invisalign indicated?

Invisalign is indicated for simple tooth movements. It can rotate teeth up to 20 degrees and tip a tooth up to 20 degrees. It is good for closing spaces and to uncrowd teeth. If the crowding in the

lower anterior is severe, a one lower incisor

extraction can be done. Caution is needed in that the patient must be warned and sign an informed consent form stating that the papilla may be missing between the teeth at the end of treatment at the extraction space. This is not just common to Invisalign, but when doing one incisor lower extraction with regular braces. Also, caution must be given when extracting a lower central incisor versus a lateral incisor. Lower centrals are usually smaller than laterals, but when extracting one central incisor, you are then expecting to not only close the extraction space, but you will be going against mother nature in a special way. In many anatomy books, the mandible is considered to be in two halves like the palate.

Dr. Fox has done many one lower incisor extractions cases and many times when the central incisor is selected for extraction, the extraction space becomes hard to close with regular braces. It is believed that on some patients, the mandible midline is different in bone structure. Then, the next problem encountered is trying to keep the hard to close extraction space closed.

Another indication for Invisalign is when minor expansion is needed. Invisalign can expand across the upper



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and lower 2-3 mm., which is pretty good. If a patient comes in with minor crowding and narrow arches, space will be gained by expanding the arches.

A third indication is a patient requiring one arch treatment. Yes, braces can be used in one arch and Invisalign in the other when one of the arches is too difficult for Invisalign.

A fourth indication is patients 40-80 years old. Dr. Fox has many patients in their 70's with Invisalign and they love it. They state they have always wanted straight teeth, but do not want to deal with the harassment from their relatives making remarks if they were in braces.

#2: When is Invisalign not indicated?

Invisalign is not indicated in difficult

cases. A patient needing so much space that 2-4 premolars need extraction can't be treated with Invisalign. The trays just are not that strong to grab the teeth and move them a far distance. If you were to try this, the teeth adjacent to the extraction spaces would tip towards each other instead of moving bodily.

Severe spacing in a patient has the same problem as a patient who requires premolar extractions. The amount of total space in each arch, measured with a Boley gauge, should not exceed 2-3 mm. A diastema larger than 2.0 mm. may not fully close. When closing a diastema between the central incisors, a lingual bonded wire should be placed to hold the space closed. The final retainer tray will need to be trimmed away from the lingual bonded retainer wire on the upper central incisors.

A deep bite case, especially with a lower deep curve of spee does not

correct at all with Invisalign. Dr. Fox had training with Gordon Christensen and one of the things learned from him was that deep bite cases must have their vertical dimension increased by orthodontic extrusion of the lower posterior teeth up to the lower incisor edge plane.

Invisalign is not strong enough to carry out this movement on large posterior teeth. Also, due to chewing forces and the patient closing down most of the day, the teeth would just be pounded back down into their sockets if Invisalign was able to do it.

The best way to extrude lower posterior teeth is to place an upper bite plane retainer. This is a normal Hawley retainer made in dental school, but the acrylic behind the upper incisors is flat and thick up to the incisal edges.

Then, lower braces are placed. When the patient bites down, the posterior teeth will be discluded, allowing the lower braces to extrude the lower posterior teeth. The patient can't be switched over to Invisalign after the deep bite correction is done. The chewing muscles of the face will just collapse the bite back down. For that matter, when braces are removed from deep bite cases in Dr. Fox's office, he designs his retainers with a passive bite plane so the deep bite does not return during the retention phase of orthodontics.

Midlines are the worst type of problem to correct with Invisalign. Trying to shift an entire arch in the upper and/or lower to correct midlines is best done with braces and elastics. Dr. Fox never promises that the midlines will be corrected with Invisalign and the patient assumes all risk to this disclosed in their consent form.

Invisalign Clear Trays:



Upper Invisalign tray



Upper tray on model



Lower Invisalign tray



Lower tray on model

Invisalign is not indicated in teenagers where the 2nd molars have not fully erupted. If they have erupted, distal wedges may be needed at the 2nd molars. The reason for this is that the trays need to hug around the distal of the 2nd molars or they become real spongy and flopping around in that area if they do not fit right.

Caution is also advised in judging the maturity of the teenager patient. If they lose their glasses and contacts, keys, books and not take care of things it is best to use regular braces.

#3: How to treat unusual cases with Invisalign?

Half the time Dr. Fox gets a patient at their first visit stating they only want Invisalign. Dr. Fox then has to get creative in his treatment plan.

A patient often comes in with teeth too rotated to be treated with Invisalign. To handle this, especially in the lower arch, Dr. Fox will recommend treating the lower arch for 4-6 months with regular braces. He will tell the patient that most people will not even see the lower braces and that we will switch over to upper and lower Invisalign later. Most of the time, the patient will not object to this and they will start treatment.

The same is true with patients having alignment problems with teeth tipped more than 20 degrees. This happens many times in Class II division 2 cases at the upper incisors. Most patients do not object to upper clear braces with white wires for 4-6 months to uncrowd these teeth and then switch them over to full upper and lower Invisalign.

Patients missing anterior teeth can have pontic teeth placed in the clear trays so that during Invisalign, the public does

not see the patient missing a tooth or teeth.

Patients wanting their teeth whitened need to have it done before or after Invisalign. The Invisalign trays fit so tight that the bleaching agent can't be placed in these trays. Bleaching trays need a die spacer placed on their model before bleaching trays are made and this spacer does not exist on Invisalign trays. The patient can use some other system of whitening not involving a bleaching agent delivered in trays to do this.

Veneers, crowns and any restorations must be done before or after Invisalign. These will alter the fit of the trays and cost the patient extra fees to have new trays made if done after Invisalign has started.



#4: Facts your dentist should tell you before seeing Dr. Fox as a patient for Invisalign?

Tell the patient that 50% of patients are accepted for Invisalign. Many patients, who come to Dr. Fox, stating they will do Invisalign or nothing. Many will still do braces if they find that they are not a candidate for Invisalign.

You can use the above data to help the patient see if it is worth an exam with Dr. Fox for Invisalign. Tell them that Dr. Fox even treated himself for a year with Invisalign and he feels very

comfortable with using this method for moving teeth.

Patients should be told that the key to any successful result with anything in Dentistry is to have full models and radiographs made, studied, diagnosed and treatment planned. Dr. Fox has always found patients do not accept anything in Dentistry if they can't see their problems and are not fully educated about them.

When records are diagnosed for Invisalign, Dr. Fox has found that he first has to diagnose the records for regular braces. This helps him understand the full result that could be achieved with standard orthodontics. Then, he diagnoses the records a second time now keeping in mind that Invisalign will be used. This helps him to formulate a good informed consent form for the patient to sign since many times the patient and the clear trays will be dictating the treatment results that can be achieved.

About Dr. Fox and his Office

Dr. Fox has treated many patients over the past 19 years with Invisalign. He knows what he feels comfortable treating with Invisalign and what he does not.

Yes, most patients who want Invisalign are adults. This is good for Dr. Fox since his new office was designed exclusively to handle adult patients, especially with Invisalign.

Most patients go out of their way to tell Dr. Fox and his staff how comfortable and fun his new office is and they appreciate the care he gives. Most of his Invisalign patients refer other patients to him for Invisalign care. The final acknowledgement Dr. Fox receives

from Invisalign patients is the thank you
from the patient when they have
finished their treatment!



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