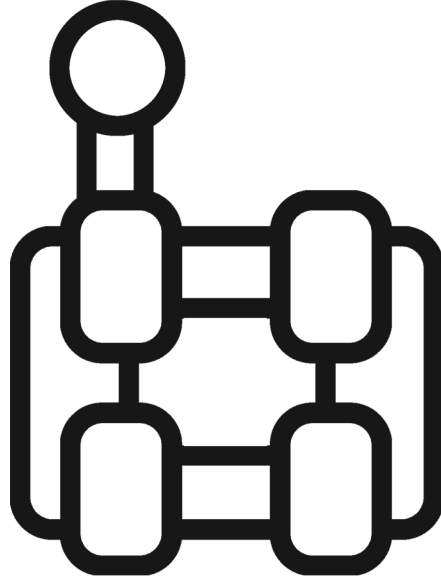


CLINICAL BONDING PROTOCOLS



PRIOR TO BONDING APPOINTMENT

1. Inspect & Prepare DIBS AI Trays

- a. Are brackets inserted in trays correctly?
- b. Are there any loose brackets?
 - i. The bottom of the bracket should line up with the bracket box- the box should lock around the bracket completely.
- c. Do trays match the patient's name?
- d. Are there any custom bases that would need additional adhesive?

2. Place Adhesive on Bracket Pad

- a. Paste brackets with recommended adhesive up to 24 hours before the bonding appointment. Store pasted brackets in the DIBS AI box they came in, away from light and air to avoid premature curing.
- b. Recommended Adhesives by DIBS AI: Brace Paste (AO), GoTo (Reliance), Connect (GC), Transbond XT (3M), LCR (Reliance)
- c. Process:
 - i. Butter adhesive in a mesial to distal motion into the grooves of the bracket pad, paying special attention to get in all 4 corners.
 1. A gingival to incisal application of the adhesive may cause the bracket to become dislodged or loose.
 - ii. Avoid getting adhesive on the tray. Wipe clean prior to curing if adhesive does get onto the tray.
 - iii. To avoid flash, do not use an excessive amount of adhesive.
 - iv. Molars may require more adhesive due to anatomy.

3. (Optional) Warming Pad -

- a. Place DIBS AI trays on the warming pad 15-30 minutes prior to bonding appointment. This will warm the trays which will assist with easier tray removal.
 - i. DIBS AI trays are intentionally more firm. A firm tray provides precise bracket position. The trays are, however, heat sensitive and become more malleable and easy to remove during the light curing process at the bonding appointment.

BONDING APPOINTMENT

1. Open Patients DIBS AI Setup on Op Computer

- a. This helps to visualize & understand bracket location on your patient.

2. Clean Enamel - **Entire Mouth**

- a. Process
 - i. Pumice the entire facial aspect of each tooth.
 - i. Rinse well.
- b. 6 & 7's may require facial calculus removal.



3. Place Cheek Retractors

- a. Ensure lips & cheeks are not touching the teeth.
- b. Use cotton roll(s) in the vestibule if additional cheek or lip retraction is needed.



4. Mechanical Bond - **One Entire Arch at a Time**

- a. Etch
 - i. No specific brand recommended.
 - ii. For bonding with crowns, composite & metal see "14. Additional Information" below.
 - iii. Process:
 1. Place etch in the general area of bracket position on the tooth.
 - a. Dry facials of all teeth completely, suction saliva.
 - b. Etch Entire Arch; upper, rinse then lower arch, then rinse.
 - i. Begin with mandibular posterior region
 - ii. Place the etch in sequential order
 - iii. Do not touch the etch tip directly on the tooth
 2. Etch remains on tooth a minimum of 30 seconds but no longer than 60.
 3. Suction & rinse
 - a. Use high speed suction
 - b. Rinse in the same order the etch was placed
 - c. Rinse each tooth for 5 seconds each fully remove etch



5. Chemical Bond - One Sextant at a Time

a. Primer: Recommended Brand: Assure Plus

b. Process:

i. One sextant at a time

1. Begin in the mandibular posterior region because of the potential for moisture contamination which would result in bracket failure.

ii. Dry entire mouth until teeth are “Frosty white”, suction saliva

iii. Apply a thin layer of primer to the approximate location etch was placed.

iv. Lightly dry primed teeth.

v. Light cure

1. Turbo setting

2. 5 passes; back and forth over teeth where the primer was placed.

3. Overcure rather than undercure for increased bond strength.

6. Place DIBS AI Tray - One sextant at a time

a. Process:

i. Fully seat tray

1. Press lightly on the occlusal surface of the tray to ensure it is seated.

2. There is no need to apply continuous pressure to hold tray in place.

ii. Press bracket to the tooth

1. This will eliminate any gaps that exist between the tooth and bracket

2. Lightly press the facial aspect of the bracket to the tooth

a. Alternately: Lightly press the bracket to the tooth with a pinching action; thumb on facial aspect of bracket and index finger on lingual.

iii. Excessive Adhesive?

1. Remove excessive adhesive with microbrush before light curing

2. Adjust quantity of adhesive on remaining trays if excess flash is present.

7. Light Cure - One sextant at a time

a. Ensure Light is on it's highest setting

b. Process:

i. Cure the facial of each tooth in the sextant for 4-5 seconds each

ii. Then do the Gingival & Incisal of each tooth for 4-5 seconds each

1. Be careful not to cure the gingival of every tooth at the same time as the heat may be too uncomfortable for the patient.

iii. Each tooth receives a total of 12-15 seconds of curing time.

iv. Remember to overcure rather than undercure.

8. Immediately Remove Tray After Light Curing - One sextant at a time

- a. Use an instrument such as a scaler or rounded carver to remove IDB tray
- b. Process:
 - i. **IMPORTANT:** Remove each sextant immediately after light curing and before moving onto the next section.
 - ii. Start on one end of the tray. Use a scaler or rounded carver to pull the tray from the interproximals and brackets of each tooth.
 - iii. Once the tray has been separated from the teeth you can use your fingers to peel away.

9. Repeat Steps 4-7 for each remaining sextants.

10. Check for Flash - Entire Mouth

- a. Excess Flash
 - i. Use black light to view excessive flash
 - ii. Remove excess with white stone

11. Ensure Each Bracket is Fully Bonded to the Tooth - Entire Mouth

- a. With either cotton tip pliers or your fingers hold the M and D portion of the bracket and move back and forth to ensure complete adherence.

12. Check Bite

- a. Bracket collisions?
 - i. Determine necessity of a bite turbo.
 1. If it will be located in the anterior or posterior.
 - ii. See “Bite Turbo” section for bonding bite turbos with DIBS AI trays.

13. Place archwire and, if applicable, ligatures.

14. Patient/Parent Instruction:

- a. Review & have patient demo elastics
- b. Review oral hygiene instruction; brushing, flossing, wax, broken brackets, and food list
- c. Inform parents

15. *Additional Information*

- a. Debonds or Difficulty Bonding 7's
 - i. Section the tray to specific tooth
 1. Tray Removal Section Process:
 - a. Option 1: Pin Cutter
 - i. Section the tray using the pin cutter.

b. Option 2

- i. Warm the DIBS tray using the Tray Warmer or Warming Pad
- ii. Use an Exacto knife or scalpel to cut the tray

2. Insert bracket into tray

3. Bond - Follow processes above

b. Bonding to Porcelain, Composite, Metal surfaces

i. Composite, Stainless Steel Crowns, Acrylic Temporaries

1. Process:

a. Pumice

b. Sand blast approximate area where bracket will be placed

c. Primer: Same protocols as enamel

ii. Porcelain, Zirconia, Lithium Disilicate

1. Prophylaxis

2. Sand blast approximate area where bracket will be placed

3. 1 coat of porcelain conditioner

a. Dry 2 minutes

i. Use Tray Warmer provided by OrthoSelect for enhanced drying.

4. Primer: same protocol as enamel

BITE TURBOS

1. Inspect Trays for Tears

a. After bonding brackets, check for tears in the sections with bite turbos.

b. If applicable: The DIBS AI can be sectioned to create a jig just for the turbo.
(See "14. Additional Information" above for this process)

2. Process:

a. Apply a thin layer of vaseline or mineral oil to the area of the tray with the turbos to keep the resin from the turbos from bonding to the trays.

b. Add resin/ composite to the tray.

i. Depending on location, slightly overfill the turbo area in the tray to account for the occlusal/lingual concavity.

c. Seat the tray on the teeth, and light cure the resin to the teeth through the tray. Make sure to cure long enough- 12-15 seconds total per turbo.

d. Carefully remove the tray

e. Check for any holes where the turbo meets the occlusal surface.

i. Additional resin may be needed to fill in these areas.

ii. Light cure again.

f. Check bite and make sure the turbos are the proper size to avoid collisions.