



Custom Indirect Tripoding for Vertical

Objectives, Criteria, Protocol, Blue Demarcation Layer for Easier Removal

INDICATIONS FOR TRIPODING:

- Deep bite Class I or half tooth Class II cases can be successfully advanced using the Indirect Tripoding Technique. More hygienic and effective than a Rick-a-nator. Bondable anterior ramps and resin pads over the lower 2nd molars support and balance vertical.
- A benefit of Tripoding is that it eliminates the muscle responses caused by occlusal programs of how teeth fit together. TMJD symptoms are reduced or eliminated with the deprogramming as additional TM joint/disc space is immediately gained.
- **It is not advisable** to use the Tripod Technique to correct a full tooth Class II patient.
- Full tooth Class II cases are better treated with a Twin Block or alternate fixed/removable Class II repositioning appliance.
- ★ On a Class II Division II case, it is highly recommended to begin fixed treatment in the maxillary arch by aligning the upper four incisors PRIOR TO taking impressions for the Tripoding Technique in order to eliminate deflection of the mandible back into Class II.

LABORATORY REQUIREMENTS:

- Maxillary and Mandibular stone casts
- Construction Bite (as indicated below)

CONSTRUCTION BITE (CRITICAL REQUIREMENT FOR BALANCED TRIPODING):

- **IDEAL CLASS I MOLAR/CUSPID RELATIONSHIP TO A 5% overbite** as taught by Dr. Brendan Stack.
 - ✓ Take the construction bite with the patient standing upright (not laying back in a dental chair).
 - ✓ Use Kinesiology as taught by Dr. Brendan Stack and Dr. Harold Gelb to verify the construction bite position to gain sufficient TM joint/disc space.
 - ✓ Take a sheet of baseplate wax and cut it in half length wise. Place the wax in a bowl of hot tap water to soften then roll it like a fat pencil. Cut it to the arch length. Place the wax over the lower posterior teeth.
 - ✓ **DO NOT** cover the incisal of the anterior teeth. Place the wax LINGUAL to the lower incisors so you may visually see the overjet, overbite and midlines.
 - ✓ **DO NOT** cover the buccal cusps of the molars/bicuspid.
- **The laboratory will** take particular care to mount the patient's casts to the **construction bite**.
- The laboratory **CANNOT PROCEED** with Indirect Tripoding without a construction bite.
- **The laboratory will NEVER ALTER** the construction bite without contacting the doctor. A proper construction bite will be requested if the above requirements are not met.
- **Instructions by the Doctor to alter the construction bite** will be documented and will likely result in considerable additional chair time in order to balance the occlusion.
- There are no articulators on the market that can open and advance the mandible from a Class II CR position into a Class I ideal vertical. Only an intra-oral construction bite can replicate/balance a patient's TM joints, jaw opening and advancement position. A PROPER CONSTRUCTION BITE IS MANDATORY.

FABRICATION OF THE ANTERIOR RESIN RAMPS AND OCCLUSAL MOLAR PADS:

- The templates for the upper incisal ramps and lower molar pads will be fabricated from tooth-tone light cure resin material to provide optimal esthetics.
- The lower 2nd molar brackets will be placed occlusal/buccally to the tripoding pad.
 - ✓ In the event the lower molar pads are thin, **the laboratory will NOT** fill the voids within the indirect template but include the lower 2nd molar attachments so you may fill the entire indirect template voids chairside using the LIGHT CURE BLUE TINTED COMPOSITE RESIN.
- The anterior tripoding ramps and occlusal molar pads will be balanced to the construction bite providing little to no chair side adjustments.
- The length of the incisal ramps will vary depending on the amount of mandibular advancement.
 - ✓ Class II Division II: The ramps lingual to the upper central incisors will have less of a slope compared to the ramps lingual to the upper laterals ★ UNLESS YOU ALIGN THE UPPER INCISORS FIRST.

INDIRECT TRIPODING TRANSFER SYSTEM:

- Each Indirect Tripoding system consists of two templates (Hard and Soft)
- The Hard templates overlay the Soft templates that contain the tooth tone resin.
- There are three separate templates:
 1. Anterior Resin Ramp Templates
 2. Posterior Occlusal Molar Pad Templates: Left Molar Pad & Right Molar Pad (with brackets).

BONDING INDIRECT TRIPOD RAMPS/MOLAR PADS WITH A DEMARCATION LAYER:

- **The laboratory will** provide your office a syringe of **LIGHT CURE BLUE TINTED COMPOSITE RESIN** with your **initial** Indirect Tripoding case.
✓ **To re-order the blue resin contact Bonarch Supply Canada 1-800-267-9225.**
- It is **most important** to bond the tooth tone Incisal Ramps and/or the Occlusal Molar Pads using the **LIGHT CURE BLUE TINTED COMPOSITE RESIN** (*demarcation layer*) to allow for easy removal at the end of treatment thus preventing damage to enamel upon reduction.

REMOVAL OF THE HARD AND SOFT TRANSFER SYSTEM TRAYS:

- The Hard templates are removed first followed by the Soft templates:
 - ✓ The anterior ramp templates are removed by peeling from the incisal edge towards the tongue in order to have the least amount of pressure placed on the incisal ramps.
 - ✓ The posterior occlusal pad templates are removed peeling up from the lingual to the buccal.

SUPPLIES INCLUDED WITH EACH INDIRECT TRIPODING CASE:

- Five bags of 5/16" 2 ½ ounce vertical box elastics.
 - ✓ **The patient MUST wear 5/16" 2 ½ ounce vertical box elastics during sleep (or longer if prescribed) in order to ultimately sock in the posterior occlusion while increasing vertical.**
 - ✓ **The elastics extend from the upper cuspids/1st/2nd bicuspid ball hooks to the lower 1st/2nd bicuspid ball hooks.**
 - ✓ Place different colored ligating elastics around the tie-wings **UNDER** the archwire otherwise you may negate the benefits of a low-friction bracket system. *The coloured elastics will help identify the bracket ball hooks for the vertical box elastics to be ligated by the patient.* The vertical box elastics will expedite vertical and encourage the mandible to posture onto the Tripoding ramps **especially during sleep.**
- An assortment of appropriate archwires for tripoding.
 - ✓ If you have received a Case Evaluation the archwire sequence and/or other supplies outlined will be provided.
- 2nd molar brackets for your direct placement on the lower 2nd molars once vertical is normal.

ATTENTION DOCTOR:

- Lower 1st molar **CONVERTIBLE** tubes will be **opened** for easy entrance into the slot.
- The lower opened convertible tubes will also be placed occlusal/buccal on the 2nd molars for tripoding.
- The initial light archwires will have a **LIGHT CURE RESIN BALL** at each end (providing additional patient comfort) also preventing the archwire from sliding out of the terminal molar tubes once ligated.
- Ligate the archwire into the slots of the lower 1st/2nd molars with figure eight rubber ligatures or stainless steel ligature wire.
- It is **most important** to bond the incisor ramps and/or the occlusal pads using the **LIGHT CURE BLUE TINTED COMPOSITE RESIN** for easy removal (*demarcation layer*) **IN ORDER TO PREVENT DAMAGE TO ENAMEL UPON REDUCTION** as the molar pads and incisor ramps are removed.
- If your future treatment plan includes 2nd molar replacement **DO NOT** perform 2nd molar replacement **PRIOR TO** correcting vertical and A-P. You may consider performing 2nd molar replacement once you have obtained ideal vertical leaving the incisal anterior ramps for an additional 4-6 months to further stabilize vertical and A-P.

Please visit our website at www.orthodontic.ca and select the LABORATORY tab followed by FIXED APPLIANCES to view a sample case presentation for INDIRECT TRIPODING FOR VERTICAL.

Thank you for your confidence and continued support, Emmett Griffiths griffiths@orthodontic.ca

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