



TECHNICAL GUIDE



Galella Habit Appliance

Description:

The Galella Habit appliance is primarily used to correct aberrant tongue habits, however, a secondary function of the appliance is to deter thumb sucking. The appliance is designed to be physiologically congruent with normal tongue function and is a simple appliance consisting only of a large coffin loop and a lingual arch wire that supports a habit bead. It is built on bands placed on the first permanent molars. The appliance is inserted into horizontal tubes (Mia tubes) that are placed on the lingual of the bands and it is in the family of 'fixed-removable' appliances. It is the design, position, and function of these components that make this appliance unique and highly effective.

The coffin loop is large, about a third the width of the entire palate, and is positioned approximately 8 to 10 mm away from the palate. The lingual arch wire supports a habit bead that is positioned over the posterior third of the incisive papilla. When the patient swallows they are instructed to wedge their tongue in between the bead and the roof of the mouth. They are also instructed to 'pull' the bead towards the back of the mouth throughout the day. The coffin loop functions to remind the heel of the tongue of aberrant tongue swallows but also, because of its position away from the roof of the mouth, helps to intrude the molars thus aiding in the closing of the bite. The anterior position of the bead, combined with the patient's exercise of 'pulling' the bead towards the back of the mouth, functions both to retrain the tip of the tongue and as a deterrent to aberrant tongue thrusting.

The appliance's effectiveness is enhanced by several factors. First, it is fixed and therefore treatment is continuous and does not rely completely on patient compliance*. Second, because both parts of the tongue are retrained (the tip and the heel) at the same time it is much more effective than traditional habit appliances that only retrain one part of the tongue. Third, in addition to retraining the tongue it also functions to close the anterior open bite that is associated with this type of case. Fourth, because it is a banded, fixed-removable appliance, the bands do not have to be removed to begin fixed straight wire mechanics and if needed, the appliance can stay in the patient's mouth as a reminder while straight wire is initiated.

*Compliance is required of the patient in exercising the tongue in the proper positions.

Indications:

- Aberrant tongue function.
- Protrusive or lateral tongue thrusting.
- Anterior open bite from thrusting.
- Posterior open bite from thrusting.
- Thumb sucking.

Contraindications:

None.

Alternate Appliances:

- Traditional habit appliance with crib and/or spikes.
- Transpalatal Arch with a habit bead.
- Bluegrass appliance.

**Clinical Procedures:**

1. One week prior to taking impressions place separators for the 6-year molars. Separators need not always be placed before impressions and this step can be eliminated if the bands are going to be sized at the laboratory.
2. One week later size bands for the 6-year molars, or, indicate on the lab slip if you want us to do it for you. Remove the bands and place them in a bag or envelope to be stapled to the lab slip later.
3. Complete a maxillary impression.
4. Pour impression with lab stone. Do not pour bands up in impression.
5. Staple the bag/envelope with the bands in it to the lab slip. Send the case to the laboratory with a completed *Orthodontic Technologies* prescription form. If applicable, indicate the type of buccal attachment desired. We will provide the lingual attachments (horizontal Mia tubes).

Delivery Suggestions:

1. Trial fit the appliance and if needed make adjustments to the wires.
2. Separate the bands from the appliance.
3. Cement the bands onto the 6-year molars.
4. Insert the Galella Habit appliance on one side of the arch first, then insert the other side of the appliance into the opposite lingual sheath. Check that the lingual arch wire does not impinge on the tissue and that the bead is free to spin.
5. Give instructions to the patient on the wear and care of the appliance.
6. Give instructions to the patient on exercising the tongue in the proper positions. Specifically, to wedge the tongue between the bead and the roof of the mouth when swallowing and throughout the day to 'pull' the bead towards the back of the mouth.
7. Schedule the patient for a one week check up. Thereafter, every six to eight weeks to monitor their progress.

Length of Treatment Time and Results Expected:

To be effective and to prevent habits from returning, treatment time should not be less than six months. Treatment time can be extended up to 12 months or longer if needed or if using the appliance in conjunction with fixed straight wire treatment.

The treatment goal is permanent correction of habits.

Holding Phase:

After a patient's habits are no longer evident, a holding phase of at least three months is prudent.

Tip: After orthodontic treatment is complete and you are in the final, retention phase, the addition of a small habit bead to a removable retainer appliance is a reasonable consideration for long term stability. Likewise, corrected anterior open bite cases are best retained with an appliance that offers maximum control over the six upper anterior teeth (e.g., a double loop labial bow, a labial bow with acrylic, or a flat labial bow).