



Twin-Block – Protrusive Construction Bite

» BITE REQUIREMENTS:

An accurate **bite registration** is very important to the success of any functional appliance. The construction bite represents exactly how the appliance should fit in the patient's mouth. This information is crucial to the appliance construction. This information will direct forces, enabling the required dental and orthopaedic changes.

These factors need to be recorded in the bite.

1. Midlines

Ensure skeletal midlines are properly aligned. Look for the maxillary and mandibular labial frenum and use them as a guide.

2. Vertical opening

The amount of bite opening will vary dependent on the patients overbite. Regardless of any parameters, the construction bite must be taken with a minimum 5 to 6 mm of space between the premolars to allow for adequate interlocking of the upper and lower blocks. Best results are often achieved with even greater opening. Thus insuring the patient is engaging the blocks rather than biting over them.

3. Mandibular advancement (protrusion)

A good starting point for most Class II cases is where the mandibular incisors are just forward of edge to edge. The bite should be advanced sufficiently to allow for some over correction to take place, as overall results will usually achieve less than the actual appliance design. Consideration should be made for the patients; degree of overjet, growth pattern and age. Vertical growers or adult patients will require less advancement than horizontal growers or mixed dentition patients. The bite should be taken accordingly.

» CLINICAL TECHNIQUE:

There are many techniques suitable for constructing functional appliance bites.

We would like to recommend and acknowledge, Dr Hilton Wasilewsky for this technique.

- **Polysiloxane putty (condensation silicon) - preferable to wax**
- **PVS bite registration material (as alternative)**
- **Wooden popstick – preferable to a plastic bite fork**



1. With the teeth slightly apart to eliminate the effects of any occlusal interference, use a red wax disposable marker to mark lines on the upper and lower incisors creating a visible guide for making sure that the bite is taken with the midlines aligned.
2. Using a wooden popstick – Position the popstick vertically between the upper and lower midlines to calibrate the vertical and protrusive dimensions. Cut small V's in the popstick to position each arch and midline within the popstick. Note: In most cases (where mandibular protrusion is just forward of edge to edge) The cut-out V for lower will usually be slightly forward of the cut-out V for the upper.
3. Have the patient practice opening wide and moving the mandible straight and forward into the prepared popstick V or bite fork ensuring that the midlines stay properly aligned. It is important that the patient move the mandible straight and forward with no deviation.
4. Prepare and mix a portion of polysiloxane putty (use a high portion of catalyst for quicker setting). Roll the polysiloxane into a sausage like shape. Then form the sausage into a arch (U shape). Place the polysiloxane over the lower teeth. Gently place the popstick over the U shaped polysiloxane and guide the patient to move their lower jaw and direct the cut-out V into the upper teeth. Alternately, you can apply a PVS bite material using an applicator gun within the occlusal gap.
5. The patient will need to remain still until the bite sets. Meanwhile you can gently push any excess polysiloxane against the patients dentition, therefore ensuring a firm fit.
6. Check the bite for proper midline, vertical and protrusive correction.

NOTE : Apart from including your bite with accurate upper and lower models or impressions. Please also include a concise prescription. The Twin Block is a very versatile appliance. It can be designed with many different clasps, springs, and expansion screws. So it is very important to give the lab your exact specifications.