



TECHNICAL GUIDE

The Cantilever Bite Jumping (CBJ) Herbst Appliance



Description & Indications for use:

The CBJ appliance is effective in the correction of Class II Malocclusion and Skeletal relationship. As a compliance-free functional appliance, it is an aggressive alternative to headgear, prevention of surgery & extraction, and sometimes-elastic therapy. This appliance is fixed to the upper permanent first molars, via oversized stainless steel crowns, and uses the stability of the maxilla to posture the mandible forward. Tubes extend from the upper permanent first molars to the Cantilever “arm” which is extended from the oversized stainless steel crowns on the lower permanent first molars. The rod, attached to the “arm” via a hinging screw, is inserted into the tube. This mechanism allows for opening and closing. The appliance is worn for approximately 12 months.



Numerous adjunctive treatments may be incorporated within the CBJ appliance to efficiently utilize treatment time. The RPE, Quad helix, W-arch, Arnold, and Frozat are just a few examples. Send upper and lower models of the patient to the laboratory-we will select the proper crown size, measure the tubes and rods, and fabricate the appliance.

The first step of the overall treatment plan should be to correct width problems. Always expand first if the width of the upper arch is going to impede the forward posturing of the mandible. If hindrance is not an issue, an expander can be added to the

CBJ instead of having to delay its implementation until the completion of expansion. After approximately 12 months when a Class I relationship has been achieved, the CBJ is removed, and the case is finished with braces for 8-12 months.

Clinical Procedures:

To seat and assemble the CBJ, spacers are placed mesially and distally of the maxillary and mandibular first molars no later than four days prior to insertion. *Using glass ionomer cement, place the upper section of the appliance, then the lower. The patient may bite on cotton rolls to hold the appliance still while the cement sets. One at a time, the eyelets of the tubes are placed over the axle on the upper first molars. Using an Allen wrench, dip the adjoining screw in *Ceka Bond, then insert into the upper axle.

Slip the lower rod into the upper tube, place the eyelet of the lower rod over the axle attached to the “arm” guiding the patient’s lower jaw into the advanced forward position.



Once the appliance mechanisms are correct and the appliance fits properly, using an Allen wrench, dip the lower screws in *Ceka Bond, then place in the lower axle.

*For easier removal of the CBJ appliance, an occlusal removal hole or vertical removal notch may be placed in the crown before cementing. If this is not done, a separator, such as “Chap Stick” may be placed on the occlusal surface before cementing.

*Ceka Bond is used on the screws to keep them from working loose. It can be purchased through Preat Corporation (800)232-7732.

Patient Management with the CBJ Appliance

Doing as much as possible at each visit and using compliance-free appliances are welcome services to the parents and patients. The CBJ appliance decreases the monitoring needs of the parents and the demands placed on growing children. Most parents are very appreciative of not having to spend so much time in the dental office.

This treatment normally allows for the patient to be seen at six to eight week intervals. It also aids in preserving the tooth surface because it decreases the length of time the patient is required to wear braces. Remember, for our patients braces are only fun for four to six weeks, then, they are just a lot of work!

No doubt, at first glance the CBJ appliance is scary. If the case is a skeletal Class II, you may have the patient slide the lower jaw forward into super Class I. Then, have the patient hold the jaw in this forward position and close the lips. The parents can actually see the more balanced face without the characteristic roll of the lower lip. This helps them understand that the problem is a skeletal one with a deficient lower jaw. At this time, discuss the CBJ and how it works.

After seating the appliance, most doctors advise the patient to do most of their chewing with a knife and fork for a few days until they get used to the appliance. Because the mandible is postured forward their teeth will not meet-this is normal. Also, have the patient open wide, and if the rod comes out of the tube, demonstrate how to guide it back together.

The patient will usually feel some tenderness in their teeth and muscles in the cheeks. This is normal and usually lasts only three to seven days. The appliance may irritate the inside of the cheeks until these areas have built up calluses. It is important for the patient to keep the appliance clean to avoid infection in the irritated soft tissue.

Although the CBJ appliance is a low maintenance appliance, considerable time, encouragement, and instruction must be performed before or at the initial placement of the appliance. It is important for the patient to understand why they have the appliance, and that it is replacing headgear, extraction, removable appliances, or surgery. It may help to assure them that what they are feeling is normal for this type of appliance and that you, and your staff, are available for questions. Simple written instructions, for the patient to reference at home, may help save hours of worry and time on the phone.