



TECHNICAL GUIDE

CD Distalizer (Mandibular)

Original designer: Dr. Peter Ching, Momence, IL.



Description:

The CD Distalizer (Mandibular) appliance is designed to uncrowd arches by distalizing Mandibular 6-year molars, principally for patients who are to be treated non-extraction, ages 10 years and 14 years. If the patient is older than this age range, it is nearly obligatory to extract the 12-year molars to achieve distalization of the 6-year molars greater than 1 to 2mm on each side of the arch. Immediately following the extractions of the 12-year molars, however, lower 6's can be distalized 3 to 5mm, depending on the maturity of the patient and the proximity of the lower third molars.

The CD Distalizer appliance is a fixed molar distalizing appliance used to distalize molars on either the upper or lower arch. The appliance can be fabricated in either a unilateral or bilateral configuration; however, the bilateral choice of mechanics is generally better. The CD Distalizer is built on four bands that are placed on the first permanent molars and first bicuspid. The anchorage component of the appliance consists of a heavy lingual arch wire soldered to the lingual of the first bicuspid bands. The distalizing component of the appliance is achieved through the use of nickel-titanium coil spring that is compressed between the molar and bicuspid tubes along a buccal wire. It is the compression of this spring that drives the molars distally. It is normally useful to place a lingual guide wire tangent to the molars to prevent distal-lingual rotation of these teeth as the molars move distally. Molar distalization of .5 mm to 1 mm per month is gained from using the CD Distalizer appliance.

Indications for use of CD Distalizer (Mandibular):

- Class III growth pattern
- Mandibular posterior space loss
- Crowded Mandibular anteriors
- Patients with TMD



Contraindications for use of CD Distalizer (Mandibular):

- Mandibular third molars erupting
- Mandibular second molars adjacent to ascending ramus
- Inadequate space for distalization of Mandibular first molars

Alternate Appliances:

- Mandibular Distal Drive Sagittal.
- Bilateral E-Arch to distalize.
- Fixed Sagittal to distalize.

Clinical Procedures:*Prior to receiving the appliance:*

1. One-week prior to taking impressions, separate the Mandibular 6-year molars and first bicuspids. Separators need not always be placed before impressions, but makes it easier for the laboratory to fabricate an accurate appliance.
2. Complete a mandibular alginate impression.
3. Pour model with lab stone.
4. Complete an **Orthodontic Technologies** laboratory prescription form. See Orthopedic Appliance, Type: CD Distalizer. Note, unless otherwise specified a bilateral distalizer will be fabricated and buccal tubes with .022 archwire slots will be used on the molar bands.

When the appliance is received:

5. Disassemble the appliance by removing the left and right side buccal wires that hold the lock and coil springs. Note, the coil springs can easily be lost so it is best to do this on a tray with a lip.
6. Trial fit the molar bands and the anterior portion of the appliance; adjust if needed.
7. Seat and cement the molar bands in place.
8. Seat and cement the bicuspid bands and anterior portion of the appliance.
9. With the lock and coil component on the buccal wire (lock is mesial to the coil between the bend and the coil), insert the straight end of the buccal wire into the molar tube first, then lift and insert the bent end of the buccal wire into the tube on the bicuspid band. Make sure to insert the wire from the occlusal aspect of the bicuspid tube so that it exits at the gingival aspect.
10. After both buccal wires are in place, a pair of Weingart pliers can be used to bend the end of the wire that exits the bicuspid tube 'up'. This locks the anterior component of the appliance so that the coil components can be activated.
11. Schedule a 1-week follow up visit to check the patient's soft tissue response to the appliance and the appliance itself. Afterwards, the appliance can be monitored and activated in 3 to 4 week intervals.

Adjustment Suggestions:

Note, it has been suggested that this appliance be activated unilaterally if the second molars have been removed or are not yet erupted. This will help to prevent tipping and rotation of the molars. See additional notes in the section below on Hard and Soft Tissue Responses.

The special Gurin Lock wrench (provided with each case) is used to loosen the lock so that the coilspring can be compressed. The lock should only be turned about a ¼ turn, just loose enough to slide on the buccal wire. Do not remove the wrench from the lock head. With the wrench still on the lock head, slide the lock distally as far as it will go. Tighten the lock with the coil in its new compressed position.



At each patient visit, about every 3 to 4 weeks, the Gurin Lock is loosened, pushed distally to compress the coil spring an additional amount, and then locked in place again.

Length of time suggested, and results of treatment:

It is suggested that 3 to 6 months be set as the usual period of wear for the CD Distalizer. There is a very short learning curve for the practitioner in using this fixed appliance, since almost all factors are under the control of the Doctor. As much as 4 to 6 mm of distalization can be gained in the Mandibular arch, using a CD Distalizer appliance.

Hard tissue and soft tissue responses from wear of the CD Distalizer:

Although this appliance is designed primarily to distalize Mandibular 6-year molars, there are other re-modeling forces at work when the appliance is worn. Depending on the anterior anchorage of the heavy lingual arch wire, there can be substantial re-modeling of the Anterior Alveolus forward. Particularly this is seen when three factors are present:

1. Adjustments are made bilaterally at the same visit
2. 12-year molars are not extracted, providing greater anchorage in the posterior segment than the anterior segment.
3. The patient is in the 10 to 14 year age group, which is the age of rapid bone re-modeling due to adolescent growth spurt.

Stabilization of teeth and bone following removal of CD Distalizer Appliance:

It is suggested that a Fixed-Removable Lingual Arch (FRLA), or some other fixed retention device that provides cross-arch stabilization, be fitted immediately upon removal of the CD Appliance to stabilize the gains made in newly distalized molars and remodeled alveolar bone.

Precautions in using this appliance:

There are very few precautions to be aware of when using the Mandibular CD Distalizer, since it is a fixed appliance. However the fitting of the open-coil springs onto the .036 wire on each side of the arch is considerably eased if, before the open-coil spring is placed on the wire it is grasped in the middle using a light-wire birdbeak pliers, and compressed with the tips of the bird-beak pliers. This bends the tube of coiled wire at its middle, making it easier to stay on the .036 wire, so it stays in place while fitting the .036 wire into the Mandibular 6-year molar tube first, then subsequently fitting the bent end of the wire into the vertical bicuspid tube. Formerly, white wax was forced into the NiTi open-coil spring to keep the coil spring from slipping off the wire in the patient's mouth, but bending it in the middle of its length works better.

For Additional Information Call **ORTHODONTIC TECHNOLOGIES, INC.** 1-800-346-5133

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