

## TEMPORARY DIASTEMA

A temporary diastema (gap) may occur during MARPE treatment and teeth may shift as the upper jaw expands. This happens as the teeth shift to accommodate the expansion. The gap typically closes once the expansion is complete and with the help of braces or aligners.



**Before MARPE**



**1 Month Progress**



**3 Months Progress**



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**Right After Mid-Palatal  
Piezo Corticotomy**



**1 month progress**



**8 months progress  
(with lingual braces)**

# M.A.R.P.E.

Miniscrew-Assisted Rapid  
Palatal Expansion



**A MODERN SOLUTION FOR  
PALATAL EXPANSION**

Discover how MARPE can enhance your  
orthodontic treatment.

[THEARTOFBRACES.COM](http://THEARTOFBRACES.COM)



## BENEFITS

- Minimally invasive and much less expensive compared to jaw surgery
- Much more stabilized expansion with less tendency for relapse compared to surgery
- No need for extractions
- Wider smile
- Enhanced breathing function from improved airway space
- Reduced mouth breathing and increased nasal breathing
- Improved tongue position by increasing tongue space
- Reduction in obstructive sleep apnea symptoms and snoring

## PIEZO CORTICOTOMY

Some patients may require an additional procedure called a mid-palatal piezo corticotomy to help the suture separate and achieve skeletal expansion. Piezosurgery is a minimally invasive procedure done in office by Dr. Benson under local anesthesia. It uses ultrasonic micro-vibrations to precisely cut bone while preserving soft tissues like gums, nerves, and blood vessels. This reduces trauma with very little to no post-operative pain and swelling.

### PRE-TREATMENT EVALUATION AND PLANNING 1

Dr. Benson assesses the patient's intraoral imaging, extraoral imaging, and CBCT to codesign a custom MARPE with a specialty lab. Each MARPE design is unique and completely customized to the patient.



# TIMELINE OF MARPE

### 2 PLACEMENT OF THE MARPE APPLIANCE

If needed, a mid-palatal piezocorticotomy is performed first under local anesthesia. Then the MARPE is securely attached to the upper teeth and anchored with 4-8 TADs in the palate. The patient is shown how to activate it at home by turning a key to gradually widen the palate.



### ACTIVATION PHASE 3

The patient will activate the MARPE every 2-3 days or as instructed by Dr. Benson. This phase typically lasts 3-6 months, depending on the needed expansion. Regular follow-ups, both virtually and in-person ensure progress is monitored and any necessary adjustments are made.



### 4 ORTHODONTIC TREATMENT AND RETENTION PHASE

After achieving the desired expansion, the MARPE appliance is left in place for an additional 6 months to stabilize the maxilla. The tooth borne parts are removed from the MARPE while the TADs portion remains. Braces or aligners are added to begin actively aligning the teeth. **This makes the total expander time to be about 9-12 months.**

### MARPE AND TAD REMOVAL 5

Once the expansion is stable, the remaining portions of the MARPE and TADs are removed. Post-removal care may be needed for the TAD sites. The patient then continues with orthodontic treatment, such as braces or aligners to finish correcting the alignment and bite.

