

Elastic Mandibular Advancement



The EMA appliance is a simple, patient-friendly oral appliance created for non-invasive treatment of snoring and OSA. The primary treatment mechanism of opening the bite and gently moving the mandible forward is achieved with the use of interchangeable elastic straps that offer varying degrees of mandibular movement. The flexibility of these elastic straps provides unsurpassed lateral movement and overall TMJ comfort. The 2mm thick pressure-formed bases offer orthodontic retention (**resulting in no tooth movement**) and maximum anterior tongue space because there are no projections in the palate.

Patient Dental History / History of Disease

- The Elastic Mandibular Appliance (EMA) is case specific. Make sure the patient understands that any future dental work that changes the shape of the teeth (such as crowns or large fillings) will require a new appliance
- A history of TMJ problems indicates the need for extreme caution when moving the mandible forward

Impressions

- Take upper and lower dental impressions being careful to have no distortion to ensure maximum appliance performance
- Take a wax bite (a solid wax bite, rather than layered wax) with the patient in an unprotruded centric relation and the bite open 8–10mm in the anterior region
- Because we use the undercut areas of the teeth for retention, indicate all teeth that have a crown, an implant or are part of a bridge
- Send models and wax bite to lab

Fitting

- Try the upper and lower appliance on separately to check fit
- EMA will feel snug to the patient for the first 3–5 minutes. If pressure on one tooth stands out after 5 minutes, carefully relieve it with a large burr
- Check the posterior bite pads for an even occlusion. If either side is high, grind conservatively until both sides occlude evenly.
- Place #1 white straps onto appliance with the number facing out and deliver into patient's mouth. Additional straps are enclosed to adjust appliance until required results are obtained.
- Seat the upper appliance and have the patient move the mandible forward and bite down while pushing down on the anterior portion of the lower appliance until it snaps in place
- Question the patient on comfort of both the appliance to the teeth as well as to the TMJ
- Instruct your patient to call the office the day after wearing the appliance for the first time. Commonly reported initial side-effects resulting from the mandibular repositioning including clenching resulting in sore teeth, TMJ sensitivity and increased saliva flow. These symptoms should abate significantly or disappear completely within ten days
- If the patient experiences severe pain in either or both TMJs, they should discontinue using the appliance until they return to their baseline. If both TMJs are involved, start with the appliance only. If only one TMJ is affected, start with a #1 white strap on the noninvolved side. If smaller straps are being used and a TMJ problem develops, drop back to a larger size strap on the affect side only.
- If a patient has a difficult time placing the straps on the appliance, suggest using a tooth pick to dot a small amount of vegetable or olive oil on the head of the button to lower surface tension. After the strap goes on the button, it may be necessary to rotate the strap to seat it properly

Tertiary Care

- If after a day or so of wearing the appliance only one or two teeth are very sore, the model may have been distorted and you may need to relieve the appliance on the affected tooth with a large burr. Be very careful not to grind a hole into the appliance
- If after the first or second week the patient does not report a significant lessening of apneic episodes and/or snoring, they may start experimenting with either shorter or firmer straps. For example, some patients stretch out the soft white straps very quickly and can progress to the next firmest strap of the same length. If the patient feels the mandible could be moved further forward without discomfort, they can progress to the next shorter strap in the soft durometer. Depending on the sophistication of the patient, they may self direct this progression until satisfactory results are attained.

Straps are available as follows:

1. Extra long — 21mm (advances mandible 4mm)
2. Long — 19mm (advances mandible 6mm)
3. Medium — 17mm (advances mandible 8mm)
4. Short — 15.5mm (advances mandible 9.5mm)
5. Extra short — 14mm (advances mandible 11mm)

In the following firmnesses: Soft — White, Medium — Yellow, Firm — Blue, Extra firm — Clear
(Note: not supplied with appliance)