

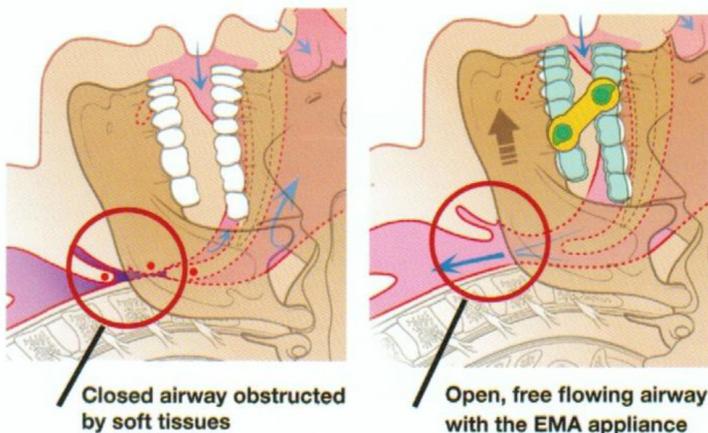


Obstructive sleep apnea (OSA)

This occurs when the muscles in the back of your throat relax. These muscles support the soft palate, the triangular piece of tissue hanging from the soft palate (uvula), the tonsils, the side walls of the throat and the tongue.

When the muscles relax, your airway narrows or closes as you breathe in. You can't get enough air, which can lower the oxygen level in your blood. Your brain senses your inability to breathe and briefly rouses you from sleep so that you can reopen your airway. This awakening is usually so brief that you don't remember it.

You might snort, choke or gasp. This pattern can repeat itself five to 30 times or more each hour, all night, impairing your ability to reach the deep, restful phases of sleep.



Important

Patients diagnosed with OSA will require a sleep study after you & the patient feel adequate treatment has occurred. The disappearance of subjective signs does not always translate to a successful treatment, especially with a diagnosis of OSA. Patients should consult their medical doctor and dentist to evaluate their condition to determine if a dental device is suitable for them.

The patient's medical history, including a history of asthma, breathing or respiratory disorders, or other relevant health problems, should be considered in determining whether this device is appropriate.

An oral appliance may be contraindicated if any of the following apply to the patient

1. Central sleep apnea
2. Severe respiratory disorders
3. A history of TMJ problems.
4. Loose teeth or advanced periodontal disease.
5. If the patient is under the age of 18, patients should be aware that use of the oral appliance may cause tooth movement or changes in dental occlusion, gingival or dental soreness, pain or soreness to the TMJ, Obstruction of oral breathing and excessive salivation.

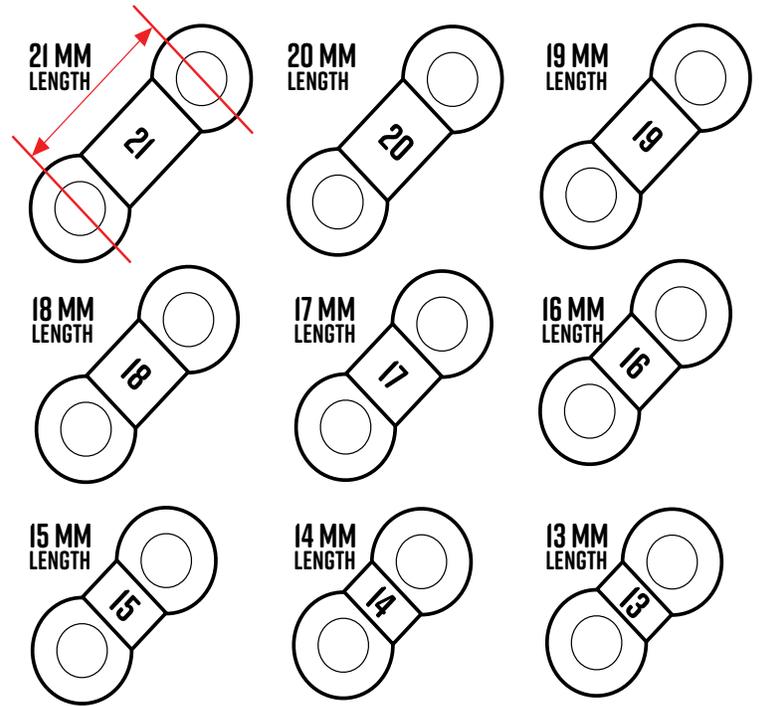
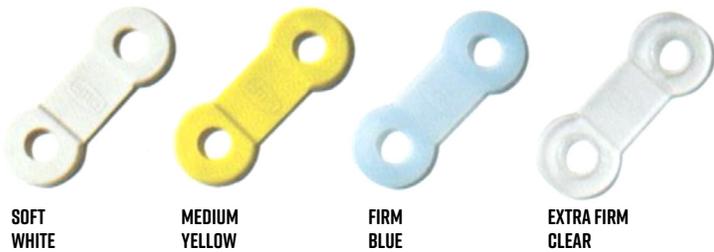


The information provided herein is general and does not constitute advice in any specific patient case.

Titrating the EMA appliance

1. Strength of Elastic Strap

- A. Soft (White)
- B. Medium (Yellow)
- C. Firm (Blue)
- D. Extra Firm (Clear)



25mm distance and Yellow 21mm are basic set. The mandible will be advanced 4mm.

2. Length of Elastic Strap

	DISTANCE BETWEEN EMA BUTTONS	
	27mm	25mm
EMA STRAP LENGTH	AMOUNT OF ADVANCEMENT OF LOWER	
21mm	6mm	4mm
20mm	7mm	5mm
19mm	8mm	6mm
18mm	9mm	7mm
17mm	10mm	8mm
16mm	11mm	9mm
15mm	12mm	10mm
14mm	13mm	
13mm	14mm	

Basic physical assessment primarily involves measuring the patient's range of mandibular motion and quality of jaw movement. If the patient can open smoothly to 40 millimeters interincisally and protrude the jaw 5 millimeters comfortably, and these movements can be performed without significant TMJ clicking or crepitus, it is reasonably likely that the appliance will be tolerated comfortably.



Chair Side Guide

Treatment of OSA & Snoring

The American academy of sleep medicine(AASM) now recommends oral appliances such as EMA as a front line of treatment for snoring and mild to moderate sleep apnea, and treatment for snoring and in cases where CPAP has not been tolerated. The FDA has cleared the EMA appliance for the treatment of both obstructive sleep apnea and snoring.

This custom oral appliance is available to dental and medical professionals through authorized dental laboratories (i.e.CreoDent)

Patient Assessment

Every health history must include questions that can reveal the presence of sleep disorders such as OSA or significant snoring. Particularly relevant questions are:

- How many hours of sleep do you get per night?
- Is your usual sleep quality good, fair, or poor?
- Do you snore?
- Has anyone noticed you breathing heavily, holding your breath, or gasping during sleep?
(i.e., breathing heavily followed by silence and then a gasp for air.)
- Are you still tired or sleepy when you wake in the morning?
- Do you remain sleepy during the day?
- Would you nap during the day if you had the opportunity?
- Have you ever fallen asleep while driving?
- Have you had an overnight sleep study?

Step 1 Impressions and Bite registration

- A. Take upper and lower dental impressions. The extension should go to the height of contour of the gingival on all sides of the teeth.
- B. Send upper and lower models and Bite registration or PVS impressions to an authorized EMA laboratory.

Step 2 Fitting Appointment

- A. Seat the upper and lower appliance on separately without the elastic straps to check fit and comfort and to make certain there is no gingival impingement.
- B. The EMA appliance may feel snug to the patient for the first 3 to 5 minutes. If patient complains of pressure or soreness on a tooth, carefully relieve problem area with a large bur.
- C. Check the posterior bite pads for even occlusion. If either side is high, conservatively grind the high side until both sides occlude evenly in centric and a protruded position.
- D. Remove upper and lower appliances.
- E. Place the Yellow 21mm EMA elastic straps on the upper and lower appliances with the EMA logo facing the tooth side. (Hint: Moistening the EMA elastic straps in hot (not boiling) water will make it easier to attach them to the appliances. After the strap goes on the button, it may be necessary to rotate it to seat it properly.)
- F. Demonstrate to the patient how to insert the appliance correctly by seating the upper appliance, then having the patient move the mandible forward



while pushing down on the anterior portion of the lower appliance until it snaps in place.

- G. Instruct your patient to call the office the day after wearing the appliance for the first time. Commonly reported initial side effects resulting from mandibular repositioning include clenching, sore teeth, TMJ sensitivity and increased saliva flow. These symptoms should abate significantly or resolve completely within ten days.
- H. Advise the patient to chew sugar free gum every morning after wearing the appliance to help return condyles to normal position.

The existing strap is 1/8 inch (0.3mm) longer than a new strap.

- D. If the patient experiences pain in both TMJs, he or she should discontinue wearing the appliance and notify your office immediately.

Step 3 Tertiary Care

The EMA appliance uses 9 different lengths of elastic straps to gradually and incrementally titrate (i.e. advance) the mandible forward. Four different strengths of elastic straps match the strength of pull to the musculature of the patient.

- A. If the patient is experiencing soreness in both TMJ, instruct the patient to replace the existing straps with the next softer strap (for example, replace yellow 21mm with white 21mm).
- B. If the straps are stretching out too quickly, instruct the patient to replace them with the next firmer straps (for example, replace yellow 21mm with blue 21mm).
- C. Once you have determined which elastic strength is the best suited for the patient, the appliance can be titrated according to the directions provided on the table. The patient should replace the EMA straps whenever the holes in the straps are oval or when t-