Instructions for Treatment with an Adjustable Mandibular Advancement Device

This is a general procedural guide for use of mandibular advancement devices for the treatment of snoring and obstructive sleep apnea.

FIRST OFFICE VISIT

A. Patient Evaluation

1. History of current problem
   • Frequency and loudness of snoring
   • Quality of sleep
   • Presence of daytime drowsiness
   • Sleep position
   • Changes in weight
   • Hours of sleep
   • Nasal congestion
   • Past treatment or sleep studies
   • History of TMJ problems

2. Patient examination
   • Examine tongue size, length and width of soft palate and size of uvula
   • Examine overbite and overjet
   • Measure maximum vertical opening, lateral excursive and protrusive jaw movements
   • Examine soft tissues
   • Evaluate periodontal condition
   • Examine dentition
   • Perform TMJ evaluation including muscles of mastication
   • Evaluate occlusal contact and wear facets

3. Consultation
   • Discuss evaluation findings and treatment plan
   • Review limitations, risks, benefits, and fees for all treatment options
   • Informed consent for oral appliance therapy

B. Impressions and Bite Registration

1. Take upper and lower alginate impressions
   • The impression should exhibit good, clear detail of teeth and gingival tissues
   • Pour models immediately to avoid distortion

2. Take a bite registration using a George gauge
• The mandible should be positioned approximately 60% of patient’s maximum protrusion
• The anterior teeth should be separated by 4-5 mm edge-to-edge
• Be certain the mandible is positioned symmetrically forward without deviation to the R or L

The George gauge can be obtained through your dental laboratory.

3. Send the trimmed upper and lower casts and George gauge bite registration to the laboratory with the prescription form for the oral appliance
SECOND OFFICE VISIT

A. Inserting the Adjustable Mandibular Advancement Device

(These are instructions for a “one piece” adjustable appliance made of a heat-sensitive acrylic.)

1. Place the appliance under warm/hot water to soften the heat-sensitive material

2. To insert the appliance, place over the upper teeth and ask the patient to move the mandible forward and close slowly into the mandibular portion. The patient should not have to use excessive force to place the maxillary or mandibular portions.

   • If the maxillary or mandibular teeth are inhibited or prevented from seating into the appliance completely, the appliance can be placed back on the casts while running them under warm water in order to stretch the appliance to improve the ease of insertion and removal. Then remove the appliance carefully while running under warm/hot water.

   • If the appliance will not seat with relative ease on to the teeth, then a minor adjustment to the interproximal areas of the acrylic or the periphery of the appliance may allow proper seating.

   Note: When the patient is able to place the appliance over the upper and lower teeth with relative ease, have them sit with the appliance in place for 3-4 minutes to allow the acrylic to cool to body temperature to be certain they are still able to remove the device without struggling.

3. To remove the appliance, instruct the patient to place the fingertips on the upper edge of the molar portion of the maxillary part of the appliance and press down by alternating the right and left sides in a rocking motion to remove it from the teeth. When the upper teeth have been freed from the appliance, the patient can place the thumbs on the lower edge of the lower portion of the appliance and rock this portion off of the teeth and remove the device from the mouth.

   Note: Instruct the patient to avoid removal of the device by simply opening the mouth without using the fingers or thumbs because it may distort the device or fracture the acrylic or screw mechanism.

4. Provide the patient with care instructions and schedule a follow-up visit in 3-4 weeks. Instruct the patient to call your office and discontinue use of the appliance if soreness or pain in the teeth or jaw is experienced.

5. Give the patient instructions on adjusting the screw mechanism for changing the jaw treatment position. One turn of the screw mechanism will advance or retrude the mandible by 0.25 mm.

6. The patient should be instructed that there is no adjustment of the mandibular treatment position during the first week. Following the first week, if the patient is still snoring or the symptoms of apnea continue, then the appliance can be advanced by 1-2 turns. The patient
should monitor the symptoms for 3 nights and if the symptoms continue, adjust the appliance 1-2 more turns. This process of adjustment and monitoring is continued until the symptoms are resolved.

7. The patient should understand that the first two weeks will be a period of adaptation to the appliance and although it is our hope that the patient will notice significant improvement in their symptoms during the first week, it may take 4-6 weeks of adjusting the mandibular treatment position before maximum benefit is noted.
THIRD OFFICE VISIT

A. Evaluate progress and make adjustments

1. Review the patient’s progress with the appliance. Discuss the change of symptoms and effectiveness and comfort of the device.

2. Patient examination
   • Check fit of the appliance
   • Verify that screw mechanism is set equally and appropriately
   • Evaluate patient’s occlusion, overbite and overjet - monitor carefully.
   • Evaluate TMJs, muscles of mastication and range of motion of the jaw

3. Make any needed adjustments to improve comfort or fit of the appliance.

4. If the patient has primary snoring or mild obstructive sleep apnea, the symptoms are well-controlled with the appliance and the patient is comfortable with the device, then the patient can be placed on a 6-month follow-up recall. If the symptoms persist, schedule another follow-up evaluation in 6 weeks (See Fourth Office Visit).

If the patient has moderate or severe obstructive sleep apnea and the symptoms are well-controlled with the appliance, then overnight oximetry testing could be completed at this time to determine if the oxygen saturation levels have been normalized as well. Schedule another follow-up evaluation in 6 weeks (See Fourth Office Visit).

FOURTH OFFICE VISIT

A. Continued evaluation of the patient’s progress, examination and adjustment of the appliance

1. Same as third office visit, #1.

2. Same as third office visit, #2.

3. Same as third office visit, #3.

4. If the patient has primary snoring or mild obstructive sleep apnea and the symptoms are well-controlled with the appliance, then the patient can be placed on 6-month follow-up recall.

   If the patient has moderate or severe obstructive sleep apnea, then oximetry testing may be indicated to determine if the oxygen saturation levels have been normalized with the appliance.

5. If the patient has moderate to severe obstructive sleep apnea and the symptoms are well-controlled and the oxygen saturation levels are normalized, then the patient should be referred back to the sleep medicine physician for a follow-up consultation and placed on 6-month recall in your office. These patients most likely will need a follow-up sleep study and
instructions for titration of the oral appliance should be faxed to the sleep disorder center prior to the follow-up sleep study.

**Note:** When the most effective treatment position is determined, it is sometimes necessary to tie-off the screw mechanism to prevent changes in the screw position over time (if the appliance is made with an expansion screw). A .012 inch gauge wire can be threaded through the holes in the screw mechanism to prevent those changes. In the future, if it is necessary to change the mandibular treatment position, the wire can be cut and the screw can be adjusted again.