The Thornton Adjustable Positioner 3 (TAP® 3) is a mandibular advancement device for the treatment of snoring and sleep apnea. Developed with advanced dental technology, the TAP 3 improves breathing and eliminates snoring in over 95% of all patients. The TAP 3 effectively treats sleep apnea and reduces the impact of associated health risks without the need for surgery, CPAP, or medication.

The TAP 3 is the latest addition to the TAP family. It offers the same results as the TAP and TAP II and fits more comfortably in the mouth. The smaller hardware provides more room for the tongue and allows the lips to close. The TAP 3 gives dentists numerous options to create the best, customized treatment solution for their patients. Interchangeable hooks can accommodate Class I, II and III bites and increase the vertical distance between upper and lower teeth.

**TAP 3 ADVANTAGES**
- Patient-friendly
- Superior results
- Easy to fit
- Infinitely adjustable
- Precise control of advancement
- Interchangeable hooks
- Freedom for lateral movement
- More room for tongue
- Allows lips to close

**TAP 3 INDICATIONS / CONTRAINDICATIONS**

The TAP 3 is intended to reduce or alleviate nighttime snoring and obstructive sleep apnea (OSA). The appliance is for adult patients to be used when sleeping at home or in sleep laboratories and is for single-patient use. The device is contraindicated for patients with loose teeth, loose dental work, dentures, or other oral conditions which would be adversely affected by wearing dental appliances. In addition, the appliance is contraindicated for patients who have central sleep apnea, have severe respiratory disorders, or are under 18 years of age.

**HOW THE TAP WORKS**

The TAP holds the lower jaw in a forward position so that it does not shift nor fall open during the night. This prevents the airway from collapsing. The TAP is the only mandibular advancement device that can be adjusted by the patient or practitioner while in the mouth. Most patients experience relief the very first night they wear their TAP. Although it may take up to a week to get used to wearing a TAP appliance, this is a small hurdle for patients. Nine in ten patients wear the device all night, every night - making the TAP a highly effective solution for both snoring and sleep apnea.
WHAT’S NEEDED TO SEND A CASE

• Alginate Impressions
  Alginate impressions of upper and lower dental arches are recorded. Record impression at least 5mm past buccal/lingual gingival margins.

• Upper/Lower Models
  The impressions are then poured in dental stone and sent to DAL.

• George Gauge Construction Bite Registration
  A George Gauge is then used to record a construction (protrusive) bite registration. The George Gauge replaces the guesswork in construction bites with a quick, simple, accurate technique. The object is to capture approximately 60% of the available protrusive.

For the step-by-step technique using the George Gauge, please refer to our “How to use the George Gauge” Tech Sheet.

TAP CLINICAL TECHNIQUE

1. Before you fit the patient with the TAP 3 TL, inspect it to make sure that the pieces are not damaged and are free from physical or cosmetic defects. If there is the slightest indication that the device may be damaged or defective, do not fit it. Also, clean the TAP 3 by gently scrubbing it with antibacterial soap and rinsing it thoroughly.

2. Start with the lower tray. Position it over the teeth. Using your thumbs, push the appliance on the teeth starting from the back and working your way forward.

3. If trays are too tight, see Tray Adjustments section below.

4. Repeat the same process with the upper tray.

5. Have the patient place both trays in his/her mouth (they should “snap” over the teeth, but not uncomfortably). Instruct the patient to hook the trays together outside of the mouth before putting the appliance in the mouth.

Ask the patient if:
  a. the units are tight, but not uncomfortable
  b. equal fit in all areas
  c. comfortable to the tongue
  d. he/she is able to remove the units

If the patient answers “no” to any of the above questions, slightly adjust the TAP 3 TL appliance until it is comfortable for the patient. See Tray Adjustments section below.

6. With both trays in his/her mouth and hooked together, adjust the patient’s jaw to a normal bite position (lips together, teeth apart and lower jaw not pulled forward) by dialing the adjustment key. Note: This position does not have to be exact, it is just a position that is easy to find as a starting point.

7. With the patient in this position, look at the lower unit in relation to the upper unit in the anterior.

Warning: If the trays disengage, instruct the patient not to re-engage the trays while still in the mouth because if he/she bites down on the hook, he/she could damage it or the socket or pinch his/her tongue. If any damage occurs, tell the patient not to use the appliance and return to your office for repair.

Tray Adjustments

Adjustments can be made to the TAP 3 TL trays and/or the lining if they are too tight. If adjustments need to be made, it is suggested that you contact the laboratory that made the TAP 3 TL to discuss the case.

Do not remove too much of the TL lining at once. This may cause the tray to lose retention and will ruin the trays because the TL lining cannot be added back to the trays. If the trays are overadjusted, the laboratory may charge you for a remake of the trays. Be conservative with your adjustments. If the trays are too loose, return them to the laboratory. If the trays are too tight, follow the instructions below.

1. First reduce the height of the flanges covering the teeth. Do not relieve the lining.

2. If the patient still complains of tightness or discomfort of the anterior teeth, carefully remove a small amount of the dual laminate lining from the areas of the tray with too much retention. Use a thin straight acrylic burr and then a sharp knife to remove the tags.

3. Fit the tray in the patient’s mouth with each adjustment.
**HOW TO ADD POSTERIOR STOPS**

1. Roughen the hard plastic in the area of the first and second molar.
2. Lubricate the upper tray with Vaseline and place in the patient’s mouth. The Vaseline will keep the trays from sticking together when adding the posterior stops.
3. Place the lower tray in the patient’s mouth while the acrylic is in the roughly stage.
4. Help the patient to couple the upper TAP 3 tray with the lower while the lower is in the patient’s mouth. Have the patient gently snap the upper tray over his/her teeth by pushing it up with his/her thumbs. Be sure the patient does not bite down on the stops. The hook should be set in the patient’s treatment position.
5. With the trays coupled in the mouth, have the patient bite down.
6. Once the stops are set, first smooth the area with your finger. This will ensure there is not any rough spot that may irritate the patient.

**HOOK SETTING & ADJUSTMENTS**

Note: The setting adjustments are written from the perspective of the practitioner looking at the patient.

The initial treatment position of the hook should be set by the prescriber according to the following instruction. The hook moves forward and back by using the adjustment key to dial the adjustment screw clockwise or counterclockwise. Each 180° turn is a .25mm adjustment.

1. Have the patient place the device in his/her mouth. Instruct the patient to couple the trays together before putting in the device.
2. Dial the adjustment key clockwise to the patient’s maximum mechanical protrusion (MMP). The patient will feel a slight stretch in his/her temporalmandibular joints at this point. If the patient does not reach this maximum passive protrusion with the hook located in the slot of the lower socket, then have the patient place the hook behind the socket and continue to dial the adjustment key until he/she reaches this point.
3. Remove the trays by pulling on the posterior of the trays.
4. Mark the base plate even with the anterior side of the hook to indicate the MMP point. Use a cut-off disc or a diamond bur to mark the base plate. The MMP mark is a permanent record of the patient’s maximum range of motion at the initiation of treatment.
5. Place the device back in the patient’s mouth.
6. Dial the hook counterclockwise until the patient’s teeth are end to end. This is the patient’s starting position.
7. Again, mark the base plate even with the anterior side of the hook. This indicates the patient’s starting position.
8. Patient should wear the appliance for 3-4 nights at the starting position before beginning adjustments.
9. From the starting position, instruct the patient to turn the adjustment key a half turn (180°) counterclockwise per night until all the symptoms are alleviated. The patient should leave the hook in the adjusted position and not dialed back to remove the appliance. The appliance should be detached from the teeth before unhooking.
10. If any position becomes uncomfortable, the patient should dial the hook back until pain subsides. Instruct the patient not to start dialing forward again until the jaw is comfortable. If the patient’s pain does not subside, you may want to schedule a consultation for evaluation.

Over time, the patient will likely find the best subjective treatment position based on tolerability and reduction or elimination of snoring noise and symptoms of sleep deprivation. The optimum treatment position is found over a period of time and varies from patient to patient. It is recorded permanently on the advancement mechanism using a disc or bur.
THE BITE TAB EXERCISE FOR TAP APPLIANCE USERS

All patients using mandibular advancement orthotics for the management of sleep disordered breathing will feel temporary changes to their bite each morning. The front teeth will hit with more force than the back teeth. This may be caused by the prolonged shortening of the muscles that provide us the ability to push our jaws forward. In the morning, those muscles must be stretched to allow the back teeth to come together properly. Failure to do so could result in a permanent change to your bite. This temporary change may also be due to transient changes in the fluid location and pressures in the joint. It is very important therefore to be compliant with this exercise early in the day, every day.

Upon waking, place bite tab between your front teeth and slide your jaw forward. Then slide your jaw backwards, the opposite direction as far as it will go and apply moderate biting pressure until you feel a slight tension up near your ear. This is the proper stretching of the muscle. Continue 15-20 second repetitions, testing your bite recovery. Continue these repetitions as needed to normalize the bite.

Repeat the procedure with the bite tabs between the eye teeth biting with jaws aligned, attempting to bring the back teeth together. Again they cannot touch. You may find using one tab at a time alternating sides is also effective. Leaning your chin into your palm at a table with head facing down, slack-jawed, can also be effective at restoring the bite. Repeat this process later in the day if needed. Some patients report unlimited gum chewing can be helpful.

If you are unable to recover your bite rapidly and completely each day, contact your dentist. A slower advancement rate may be recommended after normalization of your bite. If you notice any changes in your joint, bite or muscle comfort, contact your dentist.

HOMECARE INSTRUCTIONS

Good oral hygiene at night before using the TAP appliance is the first step in proper appliance care. Thoroughly brush and floss teeth and gums. Brush tongue and rinse mouth. TAP TL appliances with clear retentive liners should be cleaned each morning with a thorough brushing using a dollop of liquid antiseptic soap. Rinse away the soap, shake off excess water and place appliances in the denture cup with the top open to encourage air drying during the day. Oral Safe is the name of the cleansing solution recommended by the polymer manufacturer. Place the open cup in a dark drawer away from any possibility of contact by pets as dogs particularly enjoy oral appliances as chew toys. Avoid storage where excessive heat may cause irreversible damage to the appliance.
How to Use the
GEORGE GAUGE

The George Gauge replaces the guesswork in construction bites with a quick, simple, accurate technique. The George Gauge can be purchased by calling Great Lakes Orthodontics at 1-800-828-7626.

1. Lower turn screw
2. Lower incisor clamp
3. Lower midline indicator
4. Bite fork
5. Body of George Gauge
6. Lower incisor notch
7. Upper midline indicator
8. Upper incisor notch
9. Millimeter scale
10. Marking end of bite fork
11. Upper turn screw
12. Prongs of bite fork

Loosen lower turn screw (1) and slide lower incisor clamp (2) forward. Center lower midline indicator (3) over lower central incisors, cinch up lower incisor clamp (2) and tighten lower turn screw.

Remove from mouth and place bite fork (4) into body (5) of George Gauge. Use gray fork for 2mm between incisors or white for 5mm. Return George Gauge to mouth with lower incisor notch (6) centered over lower incisors and instruct patient to close into upper incisor notch (8) with upper midline indicator (7) between upper incisors. Use acrylic bur to modify upper incisor notch (8) if upper incisors are badly rotated.

Instruct patient to slide mandible first into centric relation and then into full protrusive as you observe these positions on millimeter scale (9).

From this protrusive range calculate amount of protrusion needed for the appliance you are constructing for this patient. Remove from mouth and set marking end of bite fork (10) over appropriate position on millimeter scale (9) and tighten upper turn screw (11). Record at 60% of protrusive range.

Place registration material (wax or silicone putty) on the prongs of bite fork (12).

Return George Gauge to mouth with lower notch (6) centered over lower incisors. Hand patient mirror and instruct to close into upper incisor notch (8).

After registration material has sufficiently hardened, remove from mouth. Send construction bite and bite fork (4) along with models to the laboratory.