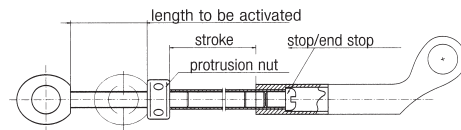


The Herbst® for Snoring and Obstructive Sleep Apnea (OSA)

The Herbst appliance has been used for many years in the treatment of Class II malocclusions in children. With minor modifications, the Herbst appliance has been proven to be effective in the treatment of snoring to moderate OSA.

"Adjustability" is the primary advantage of the Herbst appliance in snoring and OSA cases. The tube and plunger mechanism advances the jaw into a forward position. If symptom relief is not immediately achieved from the initial bite registration advanced position, this unique design allows for additional advancement of the mandible.

Hardware Options: With standard hardware, the mandible is advanced in 1mm increments by adding advancement shims onto the plungers. The clinician crimps the shims to secure them so the patient will not lose the advancement position or the shims. Some patients cannot tolerate that amount of advancement at one time. An option in these cases is the **Telescopic** Herbst hardware which allows the clinician to advance the mandible more gently and precisely without the use of shims. One turn of the advancement collar, on the lower portion of the arm near the bicuspid, until the next hole appears, advances the mandible in 1/4 increments. **Please be aware that the arrows indicate the direction of advancement, ie: right side-up, left side-down.** This unique telescopic hardware will not separate and allows an additional 5mm of movement.



Herbst Material Options

The Herbst appliance can be fabricated from three material options including hard acrylic, thermal active, or soft mouthguard material. Opposing ball hooks located in the upper and lower canine areas are joined by elastics to assure the mandible is maintained in the forward, closed bite position. The standard elastic samples provided are #64, 5/16" 8oz., they will need to be replaced periodically and any size elastic can be substituted to achieve the same objective and mandibular positioning.

Although the soft material may be viewed as more comfortable, periodic replacement may be necessary due to the nature of the material, for this reason it is not recommended for clenched or bruxers. If cared for properly, the metal framework may be able to be re-used and new material formed over it.

The hard acrylic is ideal for patients with normal dentitions. The thermal active material is suggested for patients with short clinical crowns and dental types that do not have an ideal complement of teeth.

Construction Records

A construction bite is required. It should be open 4-5mm incisally and reflect the desired start position of the mandible. A mandibular advancement of 60-65% of the distance from centric occlusion to full protrusion is recommended.

A set of upper and lower work models poured in dental stone is recommended. If hard acrylic material is selected, two sets of models are suggested. However, if only one set of models is provided, Great Lakes will duplicate your models (additional charge) so that our technician can make the majority of your chair-side adjustments.

Patient Evaluation

Apnea is typically characterized by excessive daytime sleepiness, frequent morning headaches, and hypertension. Any patient whose bed partner reports that the patient stops breathing and gasps for air during sleep should be evaluated for OSA. If you are treating snoring, it is important to screen for possible sleep apnea which can be a serious disorder.

All OSA patients can be considered snorers, but not all snorers have OSA. Therefore, it is recommended that patients not be treated without a referral from a medical professional who is competent in the field of sleep disorders.

This device is contraindicated for patients who; have central sleep apnea, have loose or advanced periodontal disease, or are under the age of 18.

WARNINGS: Tooth Movement, Gingival or Dental soreness.

An initial examination can be completed more thoroughly by utilizing the Epworth Sleepiness Scale, in addition to your routine dental examination. The Epworth Sleepiness Scale should be completed by the patient and his or her bed partner.

Although the Herbst Appliance is a reliable and effective device when the ideal candidate has been identified, there are many factors that determine the success of any oral appliance. For example, the patient's weight is an important concern when considering the use of any oral appliance. An appliance will be more effective if the patient's weight is less than 125% of their ideal body weight. Patients whose weight is 150% over their ideal body weight will probably not have a favorable response to dental appliances. In addition to evaluating the patient for snoring and OSA, a complete medical assessment is recommended.

Appliance Delivery

For hard acrylic and soft material:

Delivering the appliance to your patient requires very little time and effort. The Herbst appliance simply needs to be evaluated for retention and areas of discomfort. After one week, check for any areas of irritation, and ask the patient to assess the effectiveness of the appliance to determine if advancement adjustments are necessary. Doctors may use the Apnea Link or Epworth to determine oral appliance progress.

For thermal active material:

At initial delivery, the clinician must first hold the appliance under warm tap water (hot to the touch). The material will soften and be pliable for approximately 10-12 seconds. After insertion and while the appliance is still pliable, patients are instructed to press along the buccal segments and press the lingual aspect with their tongue. This will allow maximum retention. The next morning, the patient should rinse with warm tap water to allow material to soften slightly for easy removal.

Patient Instructions

If your doctor chose the thermal active material version of the Herbst, please remember to first hold the appliance under warm tap water (hot to the touch). The material will soften and be pliable for approximately 10-12 seconds. After insertion and while the appliance is still pliable, press firmly along the surface of your teeth and along the tongue side with your tongue. This will allow maximum retention by forming the material to your tooth surfaces. The next morning, you should rinse with warm tap water to allow the material to soften slightly for easy removal. Doctors have reported that patients will remove the appliance while in the shower.

Patients can initially expect increased salivation when they begin to wear the Herbst appliance. The excess saliva will subside as the patient becomes accustomed to the appliance. Additionally, when the appliance is removed, the posterior teeth will be slightly separated due to fluid which collects superiorly to the head of the condyle. The fluid will drain in minutes and the teeth will return to normal.

Caring for Your Appliance

It is important **not** to soak your appliance. Store it, dry, in the case provided after following these simple cleaning instructions.

- **Use COOL water ONLY.**
Regularly clean the appliance the same way you clean your teeth – with a toothbrush, toothpaste and COOL water.
- **Do not use effervescent denture cleansers or mouthwash containing alcohol.**
Over-the-counter effervescent denture cleaners or alcohol can alter the color and damage or weaken the appliance. Using these products may void the warranty.
- **We recommend DentaSOAK® for cleaning your appliance.**
Gentle, effective, and easy to use. DentaSOAK® cleans and destroys infection-causing bacteria - in just 15 minutes. DentaSOAK® is non-toxic, alcohol free, and persulfate free. DentaSOAK® is available in a convenient three month, six month, or one year supply.

To order DentaSOAK®, ask your dentist, order on-line at www.dentasoak.com, or call Great Lakes at 1-800-828-7626. Your order will arrive in about 10 days.

Note: The Sleep Herbst Appliance is adjustable by the patient, under the direction of the attending Dentist.

Snoring and Sleep Apnea

Snoring is a common breathing disorder that occurs during sleep and is generally considered to be simply a nuisance. Snoring, however, can be associated with a more serious condition known as Obstructive Sleep Apnea (OSA). It is characterized by repeated stoppages in breathing, each lasting 10 seconds or longer. OSA has been associated with daytime sleepiness, hypertension, and cardiac arrhythmias.

In recent years, dental appliances have been used to treat snoring or mild to moderate sleep apnea. Most of these appliances reposition the mandible forward and slightly open the vertical dimension to keep the airway space open during sleep. While several types of appliances appear to be effective, it is important to select one that is comfortable, promoting patient compliance and precisely fabricated so that pre-existing TMJ problems are not aggravated.

Other Clinically Proven Sleep Appliances from Great Lakes...

Narval™ CC Appliance
Klearway™ Appliance
NAPA Appliance
Elastomeric Appliance
MPowRx™ Appliance

The Herbst® Appliance

Used in the Treatment of Snoring and Obstructive Sleep Apnea



Herbst® with Telescopic
Advancement Hardware

Herbst® with Standard
Hardware



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