

Chronic snoring may be more than a nuisance disorder. It can be a symptom of a serious medical condition.

Obstructive Sleep Apnea (OSA) is a disorder of the respiratory tract. Specifically, the airway at the level of the oropharynx is repeatedly obstructed, while sleeping, by the tongue being sucked back against the posterior wall of the pharynx. If this obstruction of the airway lasts more than ten seconds and occurs more than five times per hour, the next day the patient will usually suffer symptoms of sleep deprivation. Depending upon the number and duration of these breath stoppages, the daytime symptoms can range from mild lethargy to extreme somnolence. Severe cases can be life threatening.

Because of the proven effectiveness of many snoring/sleep apnea appliances, dentists play an important role in the treatment of this condition. Treatment should always be coordinated with a physician or sleep disorder center. Protocol can be obtained from the Sleep Disorder Dental Society or American Sleep Disorders Association.



### Klearway® Appliance\*

#### W101

The Klearway is a patented appliance used in the management of snoring and/or obstructive sleep apnea. The mechanical protrusive mechanism gives the doctor the control and the patient the comfort of gradual 1/4 or .25mm incremental movements to position the mandible to the therapeutic position. Studies prove the appliance, when worn, has substantial effects and proven results for the treatment of snoring and/or OSA. As always, in addition to the dental comprehensive exam, a thorough medical assessment is advised.

Variflex™ heat-softening acrylic is used which will allow the utmost retention. The included instructions will advise the patient to run warm to hot tap water on the appliance (prior to placement and removal). This softens the material for simple insertion; it then hardens to a firm consistency intraorally. Clamping is incorporated into the appliance for added retention.

*\*Patented #5,409,017 University of British Columbia*

**Fabrication Requirements:** Upper and lower study models, wax or silicone bite registration utilizing the 2mm or 5mm fork of the George Gauge, and 60-65% the distance from C.O. to full protrusion. This position will ensure your gradual control with 44 potential adjustments (1mm retrusive; 10mm protrusive), while still maintaining a minimal vertical opening.



### Herbst Sleep Appliance

#### I102

There is now a large body of evidence showing the effectiveness of mandibular repositioning appliances for mild and moderate obstructive sleep apnea. To give an appliance the best chance to be successful, it should be retentive, comfortable to the patient, and adjustable from its original position. The Herbst Sleep appliance (whether made of hard acrylic, soft vinyl material, or Variflex™ heat-softening acrylic) is more than adequately retentive. Herbst appliances have been used in orthodontics for decades and are well tolerated. The mandibular

portion of the appliance can be adjusted forward in 1/4mm increments using telescopic hardware. This allows gradual advancement without the use of shims and allows the clinician a more precise means of positioning the mandible to the therapeutic position. Pre-cut tubing segments of the Herbst hardware can also be used which allows 1mm advancements.

**Fabrication Requirements:** Upper and lower stone models with a construction bite open 4-5mm incisally and 60-65% the distance from centric occlusion to full protrusion.



Lynn Reid, Donna Andres  
Splints



## Elastomeric Sleep Appliance

**K101**

Studies conducted at the University of Kentucky Medical Center Sleep Apnea Laboratory have shown the Elastomeric Sleep appliance to be effective in the treatment of snoring and mild to moderate obstructive sleep apnea. The material used in this appliance is normally used for tooth movement procedures because of its elasticity. In the sleep appliance it is passive and exerts no tooth-moving forces. The Elastomeric Sleep appliance is made of soft silicone in a custom-injection process to yield the optimum in retention and patient comfort. This compares favorably in terms of comfort to other dental appliances, as well as the CPAP device commonly prescribed for sleep apnea patients by physicians.

**Fabrication Requirements:** Upper and lower stone models with a construction bite open 5mm incisally that reflects a position of the mandible approximately 50-70% the distance from centric occlusion to full protrusive.

## The NAPA Appliance\*

**C102**

Developed by Dr. Peter T. George

The NAPA appliance has been very effective in reducing objective and subjective sleep apnea and snoring. In patients who have had overnight polysomnographic testing before and after the NAPA, the average reduction in the apnea index was 77%, with a range from 49% to 100%.

Snoring in nonobstructive sleep apnea individuals occurs when the tongue is posteriorly displaced, but not contacting the posterior pharyngeal wall. This narrows the airway which, due to the Venturi effect, causes the air to move more rapidly resulting in the vibrations of snoring. Most OSA patients are loud snorers, but not all snorers have OSA. It is important to screen all snorers for OSA. No OSA patient should be treated by a dentist without the referral of a physician or sleep disorder center. Please provide upper and lower stone models. The wax construction bite should represent three-fourths the distance from centric occlusion to full protrusive. Vertical opening must be 5mm between the incisors. The midline should be the same relations as it is in centric.

\*Patented #4,715,368

**Fabrication Requirements:** Upper and lower stone models with a construction bite open 5mm incisally that reflects a position of the mandible approximately 50-75% of maximum protrusive distance from centric occlusion to full protrusive.



## Tongue Stabilizing Device

This unique device treats chronic snoring by repositioning the tongue forward instead of relying on the mandible. Uses gentle suction—rather than the alveolar ridge or dentition—to stay in place. Allows patient to swallow comfortably. Made of soft, yet durable material. No impression needed.

Ideal for these patient types:

- Edentulous
- TMJ indicated
- Large tongue
- Complicated dentition
- Periodontal problems
- Children

**Intraoral and extraoral styles available in S, M, L, XL**

### Sizing for Intraoral or Extraoral Flange Designs

To choose the correct TSD size you must obtain the tongue circumference. To measure tongue circumference, have the patient protrude (point forward) their tongue. Wrap dental floss or gauze around the neck of the tongue, midway between the tip and frenum. Measure the length of floss used and follow sizes below. Choose the measurement closest to millimeters indicated; if in between go to the larger size.

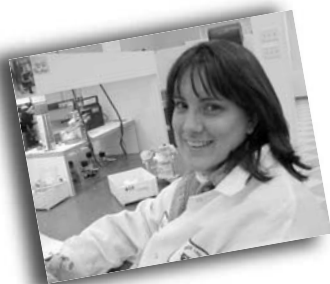
Small – 68mm, Medium – 77mm, Large – 90mm, X-Large – 103mm

**Non-refundable if opened.**



*Intraoral Flange. Fits comfortably within the labial folds.*

*Extraoral Flange. Rests comfortably on the chin and upper lip (recommended for edentulous patients).*



**Julie Jurgens**  
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