

## Which Therapy...

### Know your alternatives

- 1) **Kribbs et al.** *Objective measurement of patterns of nasal CPAP use.* AARD 147:887-895, 1993
- 2) **Evaluation of efficacy and compliance of CPAP and UPPP in the treatment of patients with OSA.** *Sleep Disorders Center of Beijing Shuili Hospital, Beijing 100036, P.R. China*
- 3) **Practice Parameters for the Treatment of Snoring and Obstructive Sleep Apnea with Oral Appliances:** *American Sleep Disorders Association Standards of Practice Committee: . Sleep 1995; 18:511-513*
- 4) **Walker et al.** *UP3 Vs LAUP for the treatment of OSA. Yearbook of Otolaryngology. Head and Neck Surgery. 1998*
- 5) **Walker et al.** *LAUP for Snoring and OSA. Laryngoscope. 1995 Sept 105(Pt1):938-43*
- 6) **Hoffstein et al.** *Uvulopalatopharyngoplasty. Chest Vol. 109 No 1, Jan 1996*
- 7) **Practice Parameters for the use of LAUP.** *An American Sleep Disorders Association Report. Standards of Practice Committee of the ASDA*
- 8) **Hoffstein et al.** *Evaluation of Variable Mandibular Advancement Appliance for Treatment of Snoring and Sleep Apnea. CHEST: Vol 116.p. 1511-1518, Dec 1999*
- 9) **Clark et al.** *A Crossover Study Comparing the Efficacy of Continuous Positive Airway Pressure with Anterior Mandibular Positioning Devices on Patients with Obstructive Sleep Apnea. Chest 1996; 109:1477-1483*
- 10) **Ferguson et al.** *A Short Term Controlled Trial of an Adjustable Oral Appliance for the Treatment of Mild to Moderate Obstructive Sleep Apnea. Thorax 1997; 52:362-368*
- 11) **Fleetham et al.** *A Long Term Randomized Parallel Multicentre Study of an Oral Appliance vs nCPAP in the Treatment of Obstructive Sleep Apnea. Am J Respir Crit Care Med 1997; 155 (part 2 of 2 parts):A939*
- 12) **Yoshida et al.** *Effects of a Mandibular Advancement Device for the Treatment of Sleep Apnea Syndrome and Snoring on Respiratory Function and Sleep Quality. CRANIO: 2000:18:2.*

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He maintains a special interest in the conservative treatment of sleep-disordered breathing. A member of various sleep organizations, he is credentialed by the certifying board of the Academy of Dental Sleep Medicine, and has lectured on the treatment of sleep disordered breathing and the use of Acoustic Reflection. He has authored articles reviewing Acoustic Reflection and establishing protocols for its use in assessing airway normalization.

Dr. Viviano utilizes various appliance designs including trial appliances in his conservative therapy of sleep-disordered breathing.



## Snoring & Sleep Apnea

# Which Therapy...

Know Your Alternatives



**Dr. John Viviano**

Conservative Therapy  
Snoring-Sleep Apnea  
Breathing Related  
Sleep Disorders

Family, General and  
Cosmetic Dentistry

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## nCPAP Surgery Airway Orthotics

*The American Academy of Sleep Medicine (AASM) is a Medical organization whose mandate includes Accreditation, Continuing Education, Fellowship Training, and Standards of Practice for Physicians, Dentists and technicians involved in Sleep Medicine.*

*The AASM recommends that the first line of therapy is to establish healthy “Lifestyle Choices” and “Sleep Hygiene”. These efforts alone may not resolve a more serious sleep disorder, but are certain to reduce it’s severity. Should further therapy be necessary, they have made recommendations on the use of nCPAP, Surgery and Airway Orthotic Therapy based on the results of current research.*

*To learn more about lifestyle choices and sleep hygiene please review our “Lifestyle Choices” and “Sleep Hygiene” brochures.*

Nasal Continuous Positive Airway Pressure (nCPAP) involves the patient wearing a mask and tube connected to a device about the size of a table top humidifier. Room air is blown into the nose, upper respiratory tract and down the airway splinting it open internally. This prevents the airway from collapsing (apnea) and tissues from vibrating (snoring).



### nCPAP

nCPAP is 100% effective if the patient complies. However, patient compliance has been demonstrated to be 50-60% with an average nightly duration of use of 5 hours on at least 4 nights per week. (1). Patients with an Apnea / Hypopnea index (AHI) greater than 30 have been demonstrated to have a higher rate of compliance. (2). The AASM recommends that nCPAP is first line therapy for moderate to severe Sleep Apnea (3).

Surgery is an attractive solution in that for successful cases, the patient is cured. The most common surgeries involve the removal of what is deemed to be excess soft tissue at the junction of the oral cavity and the airway. The success rate for these surgeries for the elimination of OSA is less than 50% (4). Although surgery demonstrates the more favorable result for simple snoring of 60% (5), many patients experience a relapse up to a year post surgery (6). When considering surgery, one should keep in mind the following; a percentage of cases experience relapse, they are irreversible procedures and they have side affects associated with them. All of these should be discussed with your surgeon before scheduling your surgery appointment. The AASM recommends that Laser Assisted Uvulopalatoplasty (LAUP) not be used in the treatment of Breathing Related Sleep Disorders including Sleep Apnea (7).



### Surgery

Airway Orthotic Therapy (AOT) has been demonstrated to be very effective for simple snoring and all levels of Sleep Apnea (8). Studies routinely demonstrate that “Snoring is improved in almost all patients and is often eliminated”.



### Oral Appliance Therapy

(3) By advancing the jaw forward a few millimeters, tension is placed on the soft tissues that make up the airway, preventing them from vibrating and the airway from collapsing.

The AASM states that “Oral appliances are indicated for use in patients with primary snoring or mild Obstructive Sleep Apnea who do not respond to or are not appropriate candidates for treatment with behavioral measures such as weight loss or sleep position change.” They go on to state “Oral Appliances are indicated for patients with moderate to severe Obstructive Sleep Apnea who are intolerant of or refuse treatment with nCPAP.” (3).

Crossover studies comparing AOT and CPAP demonstrate that AOT is effective in treating snoring and mild to moderately severe OSA, and is preferred by patients as a long term treatment. Any appliance that advances the mandible to the same degree can be expected to produce an equivalent improvement in symptoms. The issue then becomes one of comfort and compliance. (9, 10, 11) Airway Orthotic Therapy is conservative and completely reversible. Side effects are usually short lived and are rarely a problem. As a result, long term compliance for AOT has been demonstrated to be 90% after 2 1/2 years (12).

\*\*\* Before deciding on a particular therapy, educate yourself and consider all of the alternatives, likelihood of success given your circumstance, and likelihood of compliance given your personality.