OVENTUS AIRWAY TECHNOLOGY

USES AND BENEFITS

Oventus Airway Technology is designed to treat sufferers of snoring and mild to moderate Obstructive Sleep Apnea (OSA), including those unable to tolerate existing Continuous Positive Airway Pressure (CPAP) therapy options.

The Oventus treatment solution has created a paradigm shift in the treatment of OSA, using the airway technology either as an oral appliance or as a low pressure pathway used in conjunction with CPAP.

Oventus O_2Vent™ devices address multiple levels of obstruction that can contribute to OSA.

Similar to other Mandibular Advancement Devices (MADs), the O_2Vent™ advances the lower jaw forward to prevent tongue obstruction and stabilize the mandible.

What makes O_2Vent™ devices different is they feature a **unique separate airway** that allows air to continue to flow unobstructed in the presence of nasal restriction, obstruction and/or soft palate collapse while simultaneously preventing tongue collapse and maintaining an oral seal.

O_2VENT™ DEVICES FEATURE A UNIQUE SEPARATE AIRWAY

HOW NASAL RESISTANCE AND MOUTH BREATHING CONTRIBUTE TO OSA

- Nasal resistance and obstruction is associated with OSA[1]
- There is a high prevalence of nasal resistance and obstruction in the general population as well as in OSA sufferers[2]
- Nasal resistance increases during the night and in the supine position[3]

Increased nasal resistance can contribute to:

- Increased negative pressure swings in the oropharynx[4]
- Collapse at the **soft palate, lateral wall, tongue base** and **epiglottis**[5]
- An arousal as a result of reduced airflow, an increase in negative pressure swings or airway collapse[6]
- A switch to mouth breathing leading to multiple events[7]

Continued overleaf →

OVENTUS™

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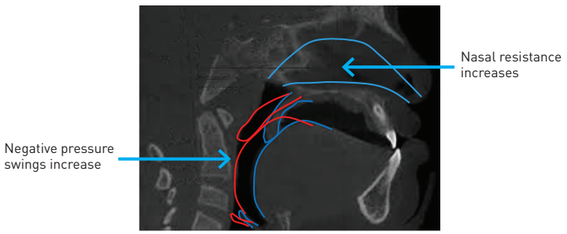
A clinical study that looked at the different sites of obstructions showed that the tongue base was involved in 40% of obstructions and was the primary site of collapse in only 20% of subjects.[8]

In patients with increased nasal resistance, soft palate or tongue based collapse, **Oventus Airway Technology** allows air to continue to flow through the low resistance airway to the back of the throat.

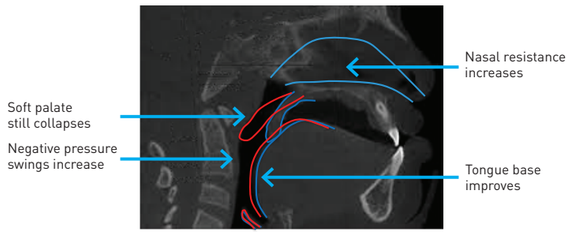
This essentially by-passes nasal resistance and soft palate collapse, reducing the negative pressure swings that cause lateral wall collapse and stabilizes the tongue base.

CLINICAL EVIDENCE

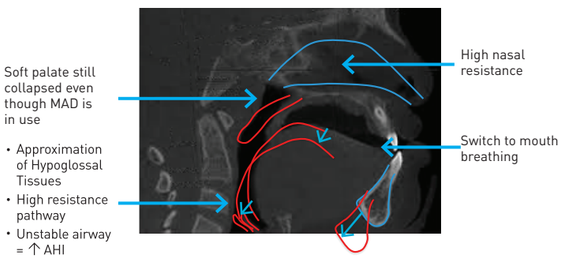
1. Site of Obstruction



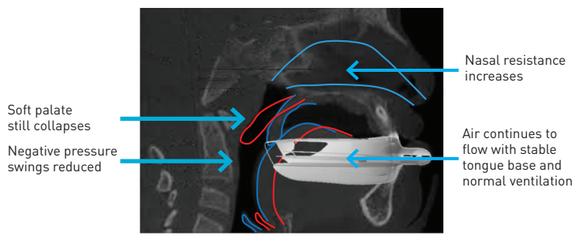
2. Site of Obstruction with Advancement



3. Site of Obstruction with Advancement

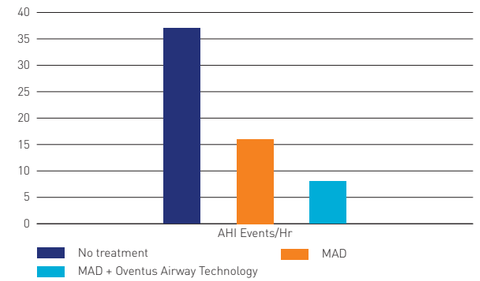


4. Site of Obstruction with O_2Vent™ in place

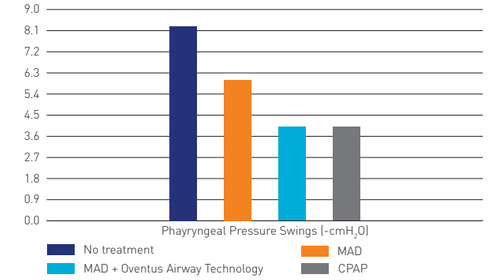


PILOT STUDY O_2VENT™ T

Oventus Airway Technology – O_2Vent™ T reduces AHI by 78%



Oventus Airway Technology Reduces Pharyngeal Collapsibility to the same Level as Optimized CPAP



Amatoury J, Tong B, Nguyen C, Szollosi I, Eckert DJ. The role of a novel oral appliance therapy device on pharyngeal pressure swings and CPAP requirements during sleep in obstructive sleep apnea: A Pilot Study. Abstract Supplement ADSM Boston 2017

INDICATIONS FOR OVENTUS AIRWAY TECHNOLOGY WHEN TO USE

Oventus Airway Technology may be beneficial when there is:

- → Nasal obstruction or increased nasal resistance
- → Poor oropharyngeal anatomy
- → Long soft palate
- → Mouth breathing during sleep
- → Heavy bruxing/clenching

If you see patients with multiple levels of resistance and/or parafunction, it is important to prescribe a device that addresses these issues.

OVENTUS AIRWAY TECHNOLOGY – EFFICACY

In clinical studies, the **Oventus Airway Technology** has shown excellent outcomes in effectiveness and compliance:

Effect on airway collapse:

- → Reduced negative oropharyngeal pressure swings and airway collapsibility[4]
- → Reduces the CPAP pressure requirements necessary to achieve stable breathing by 66%[5]

Effect on AHI:

- → 62.5% - 78% reduction in AHI[9]
- → 76% success rate irrespective of OSA severity or presence of nasal congestion (≥50% decrease in AHI)[9]

Effect on symptoms:

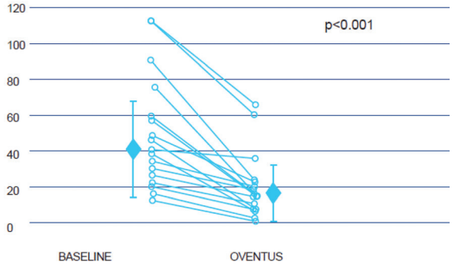
- → 82% stopped snoring completely[9]
- → Remaining 18% reported reduction in snoring[9]

Effect on compliance:

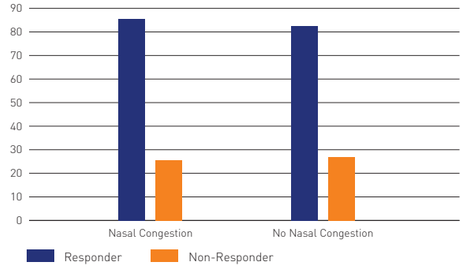
- → 82% compliance to treatment[9]
- → 6 nights averaged per week, with 7 hours average per night it was used[9]

CLINICAL TRIAL – O_2VENT™ MONO

AHI at baseline and with Oventus treatment



Response Rate by Nasal Congestion (%)



Lavery D, Szollosi I, Czyniewski S, Beer F, McCloy K, Hart C, Safety and Efficacy of a Novel Oral Appliance in the Treatment of Obstructive Sleep Apnea. JDSM. Vol 4, No 3, 2017.

WHAT CAN I LOOK FOR IN PATIENTS TO SEE IF THEY WOULD BE SUITABLE FOR OVENTUS AIRWAY TECHNOLOGY?

1. Look for signs of nasal congestion

a) Ask if they suffer from nasal congestion and/or sleep with their mouth open

b) Use visual analogue scale to rate congestion from 0-10

c) If available use rhinometry to assess nasal resistance

2. Look for signs of a long soft palate

a) Does it fall behind the tongue?

b) Swollen or inflamed soft palate?

c) Swollen or inflamed uvula?

3. Look for signs of poor oropharyngeal anatomy using their facial profile

a) High Mallampati

b) High pharyngeal grade

c) Narrow arches

d) Deviated septum

e) Underdeveloped middle facial third

4. Look for signs of mouth breathing

a) Dry mucosa

b) Relative paucity of calculus

c) Erythematous mucosa and gums

d) High vaulted palate

5. Look for signs of heavy bruxing or clenching

a) Dental attrition

b) Masticatory muscle hypertrophy

6. Additional imaging options may help decision making in choosing the appropriate device by analyzing such things as condylar guidance angle, cephalometry, soft palate length, nasal cross-sectional, possible sites of collapse as an indicator of airway improvement or advancement.

7. Recommended imaging may include:

a) CBCT

b) Lateral CEPH

c) OPG