

OBSTRUCTIVE SLEEP APNEA



A Dental Perspective

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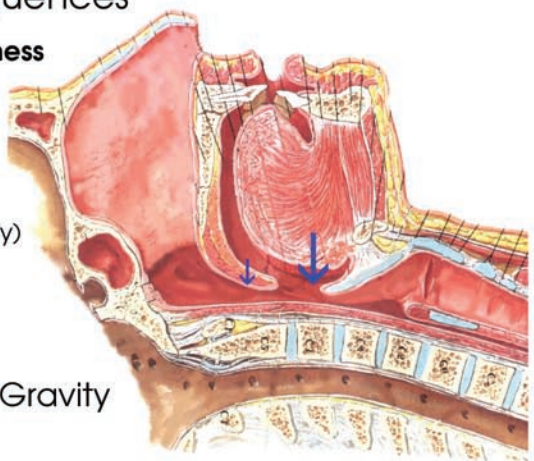
Baldwin County Orthodontic Specialists

Definition

- Obstructive Sleep Apnea (OSA) is characterized by recurrent episodes of partial or complete airway obstructions during sleep.
- The obstructions result in either a reduction in, or a complete cessation of, oronasal airflow (despite continued respiratory effort).

Symptoms & Consequences

- **Excessive daytime sleepiness**
- **Loud snoring**
- Hypertension
- Morning headaches
- Motor vehicle accidents
- Mood disorders (depression, irritability, anxiety)



Effects of Gravity

Prevalence

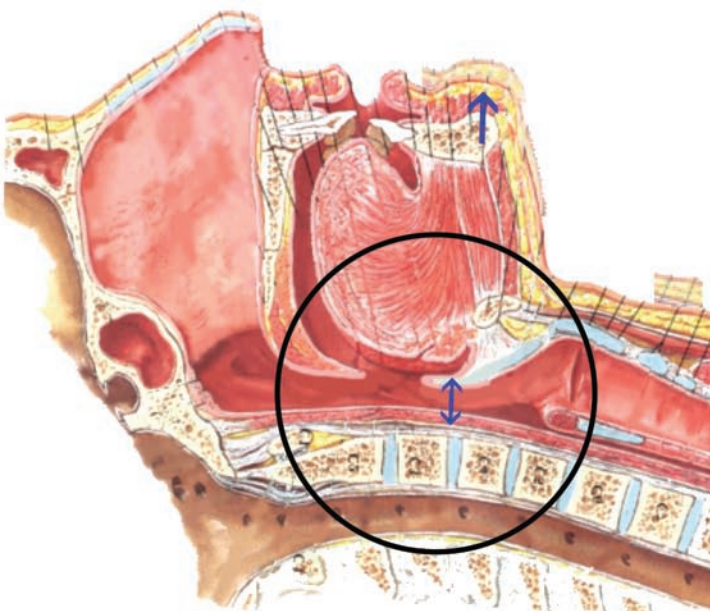
- Obstructive sleep apnea affects approximately 24% of Men and 9% of women between the ages of 30 and 60 years.
- More than 12 million Americans suffer from OSA and it is estimated , **conservatively** that 10 million remain undiagnosed.

Contributing Factors to OSA

- ***Sleep** - sleep increases the vulnerability of the airway to collapse by inducing a state of muscle hypotonia (relaxation).
- ***Airway size** - In general, the smaller the cross-sectional area of the airway, the more vulnerable it is to collapse.
- ***Obesity**
 - *OSA prevalence in obese individuals is 74% for men and 38% for women.
 - *OSA prevalence in the general population is 24% for men and 9% for women.
 - *Excess adipose tissue in the soft palate, tongue, and lateral airway walls.
- ***Skeletal Factors** - studies have reported that patients with OSA tend to have:
 - *Posteriorly displaced mandibles (lower jaws) and maxillas (upper jaws).
 - *Small Mandibles
- ***Other Factors**
 - *Smoking
 - *Alcohol use

Treatment

- *There are a variety of treatments for sleep apnea. The most appropriate treatment depends on an individual's medical history and severity of the disorder.
- *Treatment regimes include lifestyle changes such as avoiding alcohol and CNS depressants, exercise, CPAP, oral appliances and surgery.
- *CPAP (nasal continuous positive airway pressure) is currently the most common treatment for sleep apnea. The CPAP machine pushes air through the airway at a pressure high enough to keep the airway open during sleep. Claustrophobia, discomfort, noise, and leaks can reduce the compliance of this method.
- *Oral appliances: The oral appliance Dr. Glass uses treats OSA by keeping the airway open by pulling the lower jaw forward (a mandibular advancement device or MAD). The forward movement of the lower jaw and the associated muscles, opens the lower airway allowing easier breathing by preventing the obstruction. The appliance is adjustable at first so that Dr. Glass can move the jaw further or reduce the advancement as necessary. The goal is to find the most comfortable and effective position for the patient without causing discomfort or bite changes.



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EMA Custom Appliance



For more information on the EMA Custom appliance and OSA visit openairway.com. or sleepapnea.org.
Sleep Apnea can be life threatening if left untreated, so please consult your ENT/Physician for advice on proper treatment.