

An Introduction to Sleep Disordered Breathing

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UARS - Upper Airway Resistance Syndrome = **HUAR** – Higher Upper Airway Resistance = **Flow Limitation** = ***Skinny Women's Disease***

Common Symptoms:

Fatigue
Frequent Arousals
TMD / OFP / Bruxism
Hyperalgesia
Fibromyalgia

Common Clinical Findings:

Constricted / Retrognathic Arches
Small neck / Airway

3F : 1M

Sleep Study

Inspiratory Flow Limitation

“Working to breathe”

Often not significant desaturations

No snoring

Sleep Apnea Terms

- APNEA

Greek - “without breath”

Cessation of ventilation 10 secs or more

- HYPOPNEA

Greek – “reduced breath”

Decrease airflow & oxygen desat of 3% or more

Clinical Findings Predictive of OSA

- Snoring
- Bed partner reports apneas and choking
- History of hypertension
- Obesity or large neck circumference

Diagnosis of OSA

- 5 or more apneas or hypopneas per hour along with 2 of the following being present
 - Snoring
 - Obesity
 - Hypertension
 - Excessive daytime sleepiness

$$\text{AHI} = \frac{\text{Total number of APNEAS} + \text{Total number of HYPOPNEAS}}{\text{Total number of HOURS of SLEEP}}$$

Sleep Bruxism Papers in Dental Literature

Evidence that Experimentally induced Sleep Bruxism is a Consequence of Transient arousal

T Kato, GJ Lavigne et al
J Dent Res 2003; 82 : 284

Sleep Bruxism : an Oromotor Activity Secondary to Micro-Arousal

T Kato, GJ Lavigne et al
J Dent Res 2001; 80 : 1940

Sleep Bruxism is a Disorder Related to Periodic Arousals during Sleep

GM Macaluso, P. Guerra
J Dent Res 1998; 77 : 565

SDB Screening Tools

Adjusted Neck Circumference Equation

Epworth Sleepiness Scale

American Academy of Sleep Medicine (AASM)

“ Oral appliances are indicated for use in patients with mild to moderate OSA....”

“...CPAP is indicated whenever possible for patients with severe OSA before considering OAs.”

Landmark Study TAP / CPAP Comparison

- **Efficacy of an adjustable OA and comparison with CPAP for the treatment of OSAS**
 - **Holley A.B. et al., Chest 2011;140(6) 1511-16**

Suggested Treatment Protocol – OSA

- **Self adjust - subjective improvement (STP)**
- **Advance 2mm forward from STP**
- **Overnight Pulse Ox Study**
- **Less than 1% night Ox Sat < 90%**
- **Not – advance more guided by pulse ox**
- **Refer back to Sleep Physician**
 - **Follow up PSG / Home Sleep Study**

Pediatric OSA Review Article

Guilleminault C, Huang YS. Pediatric obstructive sleep apnea: A short review of clinical aspects. *Pediatr Respir Crit Care Med* 2017;1:39-45

Useful websites:

[www.tapintosleep](http://www.tapintosleep.com)

www.buteyko-breathing-method.com