



By: Dr. Richard Dunn DDS

Obstructive Sleep Apnea

What is Obstructive Sleep Apnea(OSA)?

- Apnea from the Latin word “without breath”
- OSA is a disorder where we stop breathing or have greatly reduced air flow during sleep leading to significantly lowered oxygen levels in the blood and to the brain and rest of the body. The lowered oxygen levels lead to the symptoms and disease processes we see.

By Definition:

- Apnea- total cessation of breathing for 10 seconds or longer
- Hypopnea- reduction in airflow by 30% or greater with an associated 4% or greater fall in the blood oxygen level
- Snoring- is the sound of throat constriction
 - like a musical instrument, sound made by air passing through small space and creating vibrations.

The Difference Between Sleep Apnea and Snoring

- The sound of the airway closing up (choking and gasping during sleep)
- Snoring is the sound of soft tissue vibrating(narrow airway, but not necessarily closed)
- Bottom Line: Oxygen deprivation sets the two apart that there maybe a correlation between snoring and OSA in that a large percentage of people with OSA snore.

Warning Signs



Warning Signs

- Do you wake up often during sleep?
- Do not wake up feeling refreshed?
- Do you find yourself DOZING during normal daily activities?
- Do you have problems concentrating?
- Do you have a large neck? Size of concern: Men- 17"+
Women- 15"+



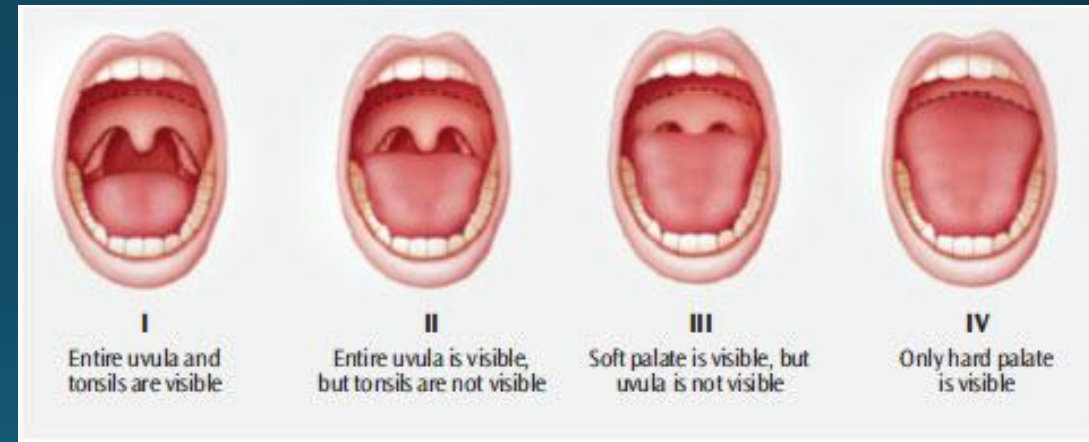
Symptoms

- Most Common:
 - Snoring
 - Fatigue
 - High Blood Pressure
- Other Symptoms:
 - Dental Symptoms(BRUXISM)
 - Morning Headaches
 - Acid Reflux
 - Diabetes
 - Impotence
 - Social Problems
 - Memory loss

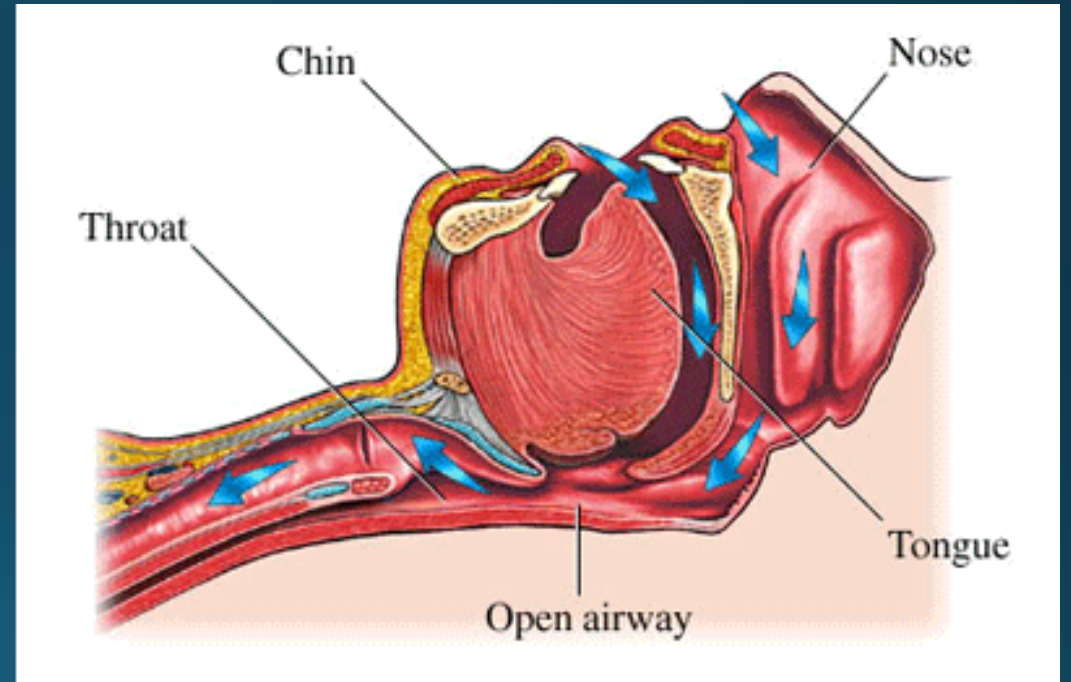
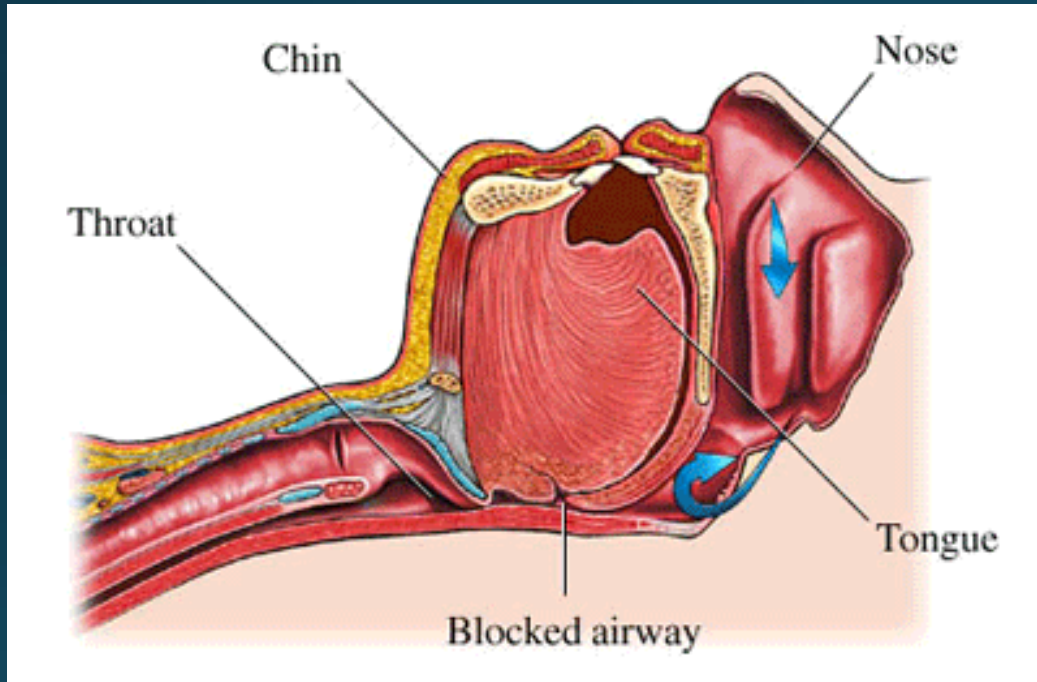


What are some of the dental factors we can identify?

- Large tongue or tongue covers/block back of the mouth
- Small jaw
- Presence of tonsils
- Clenching and grinding of teeth



Cause of OSA



Why is it Important to Treat Obstructive Sleep Apnea?

OSA is DEADLY

- 2:1 Mortality Rate

The Rule of Three

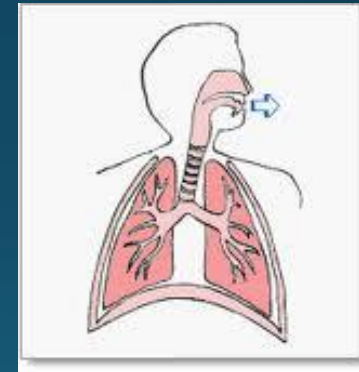
You can live 3 weeks
without food



You can live 3 days
without water



You can live 3 minutes w/o
Oxygen



Why Do We Sleep

- The more exercise performed, the more sleep is needed.
- Rest & Recovery
- Lack of “deep”(non-REM) sleep results in a person feeling physically tired
- Lack of REM sleep – irritable and anxious



OSA can Cause, Continue, Exacerbate...

- Heart Disease
- Stroke, Cognitive Changes
- Alzheimer's
- Atherosclerosis or clogging of arteries
- High Blood Pressure
- Diabetes
- Inflammatory reactions throughout body due to free radical formation
- Arthritis
- Obesity
- GERD
- IMPOTENCE!!!

Kids are not exempt (even skinny ones)



- Signs your child might have sleep apnea:
 - Snoring
 - Chronic mouth breathing
 - Tossing and turning in the bed
 - Long pause in breathing during sleep
 - Learning disorders. Ex - ADHD

Sleep Testing

Required for Diagnosis and Treatment.

It's the First Step

- Getting tested is the only way to know for sure if a patient has sleep apnea
- MD's need a sleep test to diagnose OSA
- Insurance companies need a MD's diagnosis to cover treatment

Polysomnogram-In Lab Test.

- PSG- Continuous and simultaneous recording of physiological variables during sleep. Ie – EEG, EOG, EMG (basic stages or scoring parameters), EKG, respiratory excursion, lower limb movement, and other electrophysiological variables



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Home Sleep Testing HST

- HST – Also known as a Ambulatory test. These are diagnostic machines that patient takes home and administers prior to going to sleep.

How to Treat OSA

What does CPAP stand for?

- C-ontinuous
- P-ositve
- A-irway
- P-ressure

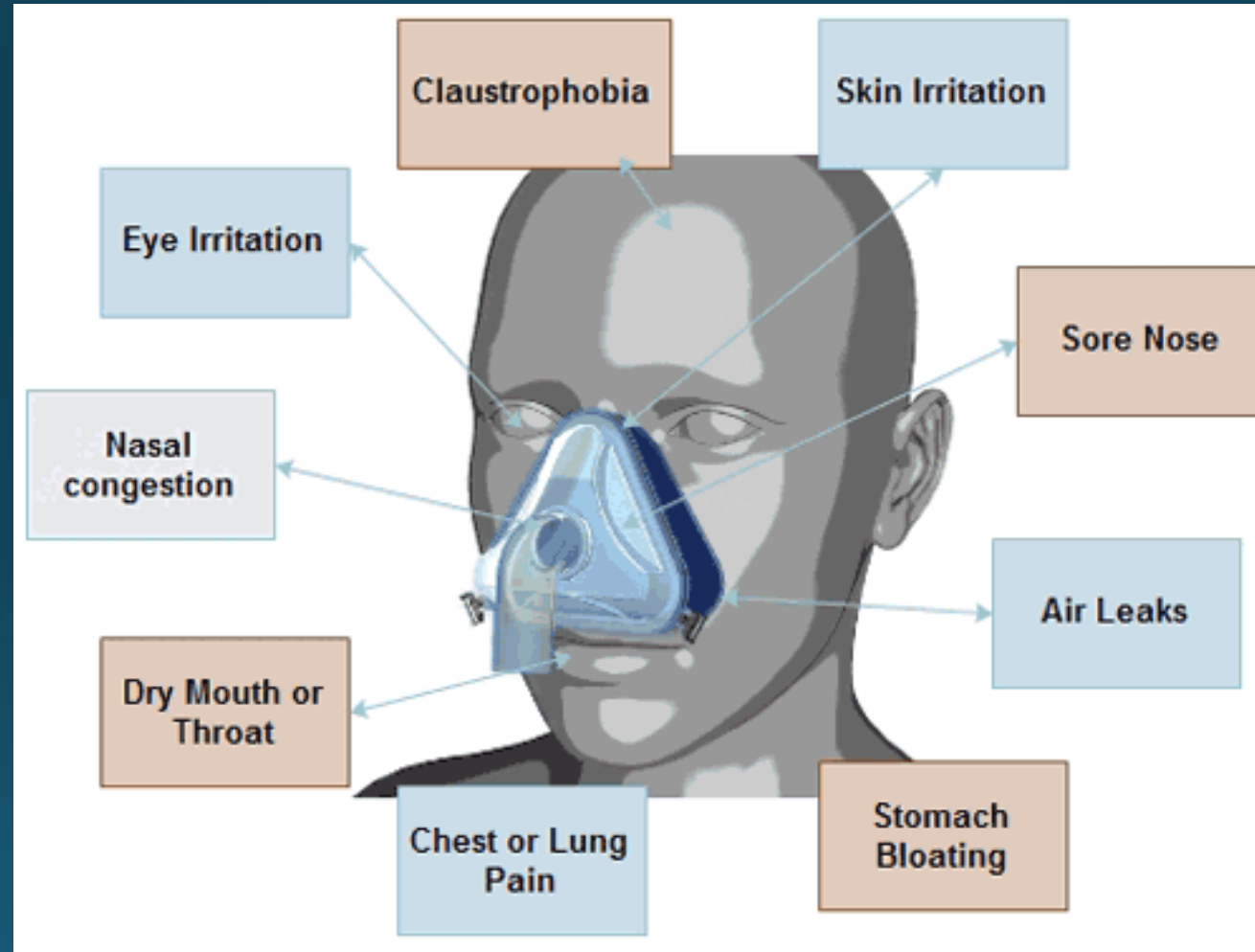
This is a CPAP mask...



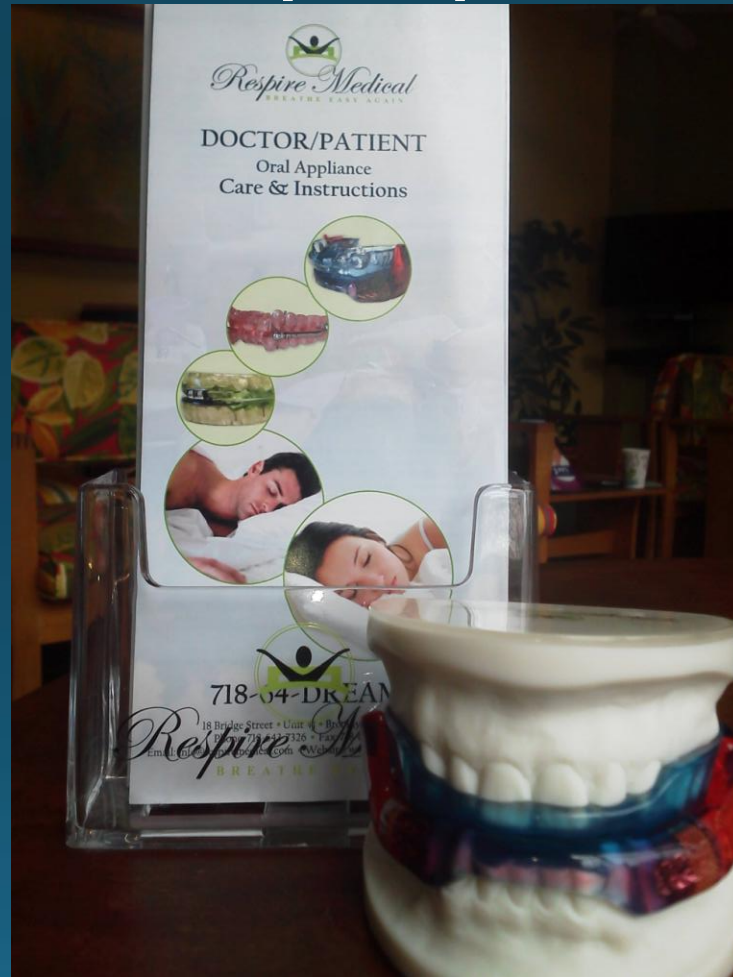
It's a blower.

- Imagine the airway as a collapsible hose like a firehose.
- CPAP Compliance – range from 10% - 60% long term

Problems with CPAP



Alternatives to CPAP for Obstructive Sleep Apnea



Oral Appliance Success

- Success for oral appliance has been documented in the literature anywhere from 50% - 90%

What are oral appliances?



- Dental retainer like devices that gently hold the lower jaw forward, thus opening airway.
- Reduce Snoring
- Reduce Apneas

Oral Appliance Positives

- Fits to your mouth so this makes the appliance comfortable.
- Able to sleep peacefully in the same bed as your partner.
- Easy to clean.
- Easy to travel with.
- No blowing of air.
- No drying of nasal passages or throat.
- No uncomfortable head gear to wear.



Q & A



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THANK YOU FOR ATTENDING