AGD 2017 Las Vegas

Non-Cardiac Medical Problems Associated with Obstructed Airway Sleep

Steve Carstensen DDS FAGD
Diplomate, American Board of Dental Sleep Medicine
Premier Sleep Associates, Bellevue, WA

Disclosures

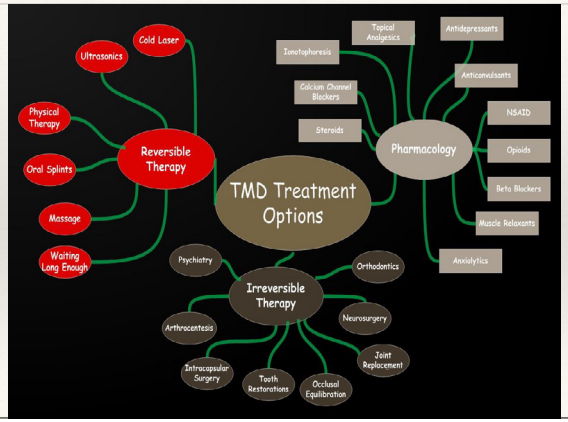
Commercial companies may have contributed to the meeting organizers to support this presentation

I receive no financial benefit for sales of any product or service mentioned in this talk

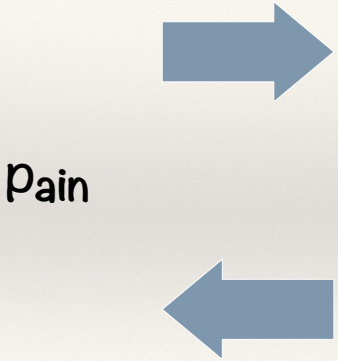
I use (and pay for) many of these products in my private practice

I am Editor-in-Chief of Dental Sleep Practice Magazine

Chronic Pain



Chronic Pain



Fibromyalgia

Commonly Reported:

- sleep fragmentation
- early AM awakenings
- Insomnia

Likely to be Diagnosed:

- O2 desaturations
- UARS
- Inspiratory Flow Limitations

Fibromyalgia

2% ♀ 44% ♂ Presenting to FM clinic Diagnosed with OSA

3% Presenting to OSA clinic Diagnosed with FM

CFS - FM

Extensive Overlap

No PSG Data

OSA Tx No Affect

Chronic Pain

Therapy often is Pharmacology

Careful of Sleep Related Side Effects

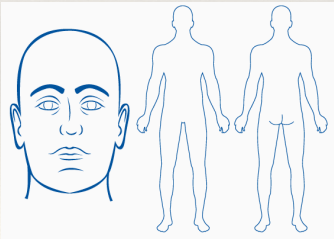
Opioids Are the Worst and Most Common

Chronic Pain Health History Questions

How Many Days Per Week Do You Consider Yourself Pain-Free?

Which Medical Providers Have You Consulted About Pain?

Do You Take Medication for Pain?



Headache and OSA

Bilateral

Pressing

non Migrainous

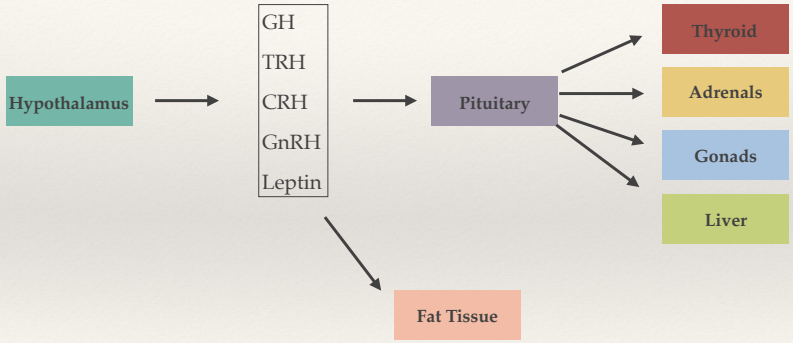
Awakening; Resolves 30 min

OSA Tx Eliminates Them

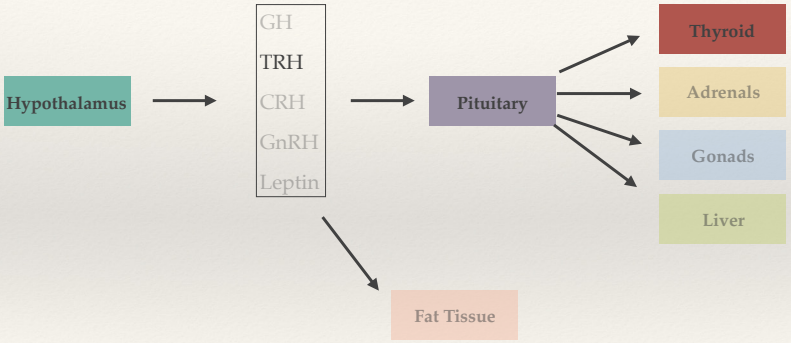
11.8% OSA patients have morning headache

4.6% of non OSA patients do

Endocrine System

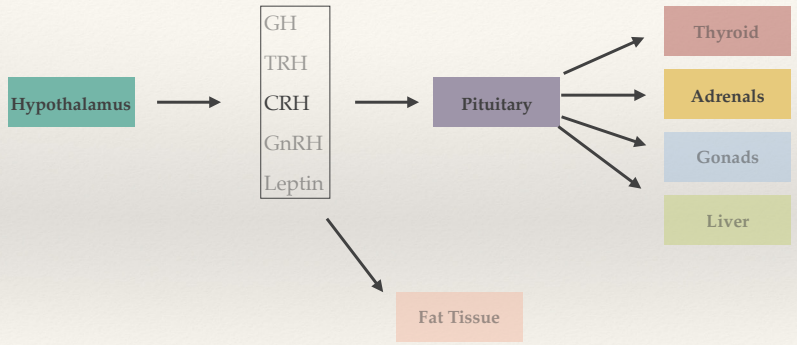


Endocrine System



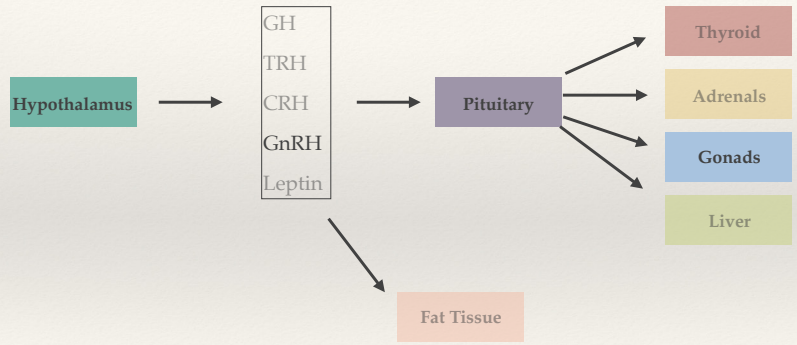
Share Symptoms

Endocrine System



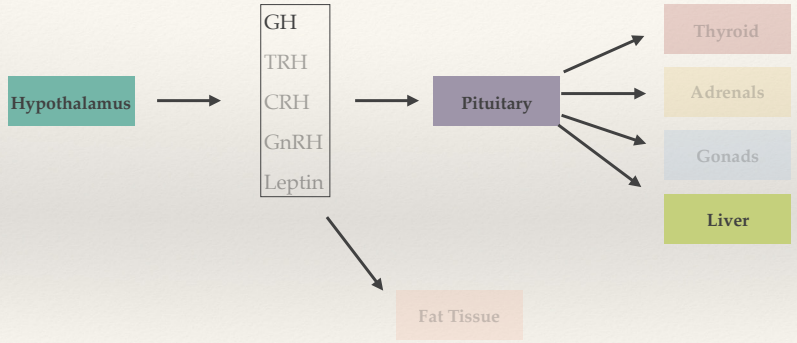
Cushing's Disease

Endocrine System



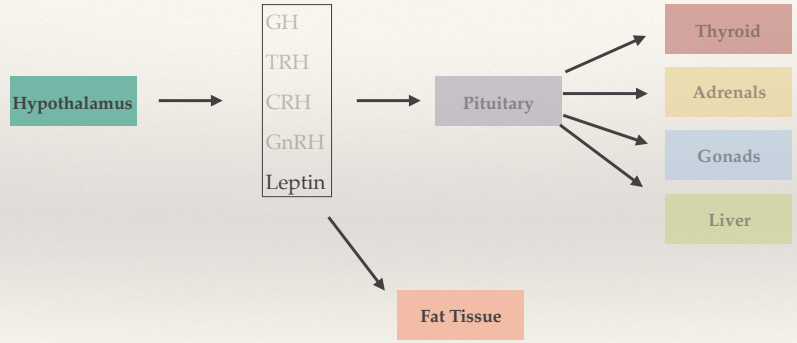
Sleep Stage Disruption

Sleep vs. Endocrine System



Acromegaly: 70%

Endocrine System



Metabolism Disruption

Endocrine System

GH
TRH
Thyroid
Fat Tissue

Careful Health History

Do Not Assume OSA is Etiology

Chronic Kidney Disease

OSA

Chronic Intermittent Hypoxia
Sympathetic Surges
Systemic Inflammation

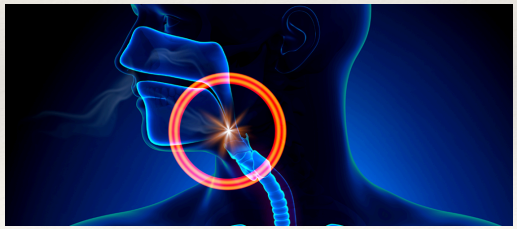
↓

Lowered Filtration Rate
Endothelia Dysfunction
Tubulointerstitial Injury - Microalbuminuria

CKD

SDB and Pregnancy

OSA is a Mechanical Problem



Airway Changes During Pregnancy

Estrogen + Progesterone Increase

↓

Mucosal Edema of the Airway

Pregnancy Rhinitis

↓

Restricted Nasal Airflow

↓

Increased Upper Airway Resistance - Snoring and OSA

Tidal Volume Changes

Increasing Size of Uterus Pushes Organs Caudally

Diaphragm is Displaced into Thorax

Volumetric Changes in Lungs Decrease

Trachea Shortens, Reducing Tension on Upper Airway

Fluid Load During Pregnancy

Blood Volume Increases by 40 - 50%

Extra Fluid Accumulating Around Upper Airway
Decreases Lumen Size and Increases Collapsibility

Increased Urine Production and Pressure
On Bladder Increase Bathroom Frequency

Interrupted Sleep During Pregnancy

Discomfort

Increased Effort of Breathing

Arousal Threshold Changes

Impaired UA Muscle Activity

Epidemiology of SDB During Pregnancy

Snoring reaches 25% by third trimester

8.4% OSA 19.7%

Steve Carstensen DDS SeattleSleepEd@gmail.com

Next: 120+ Oral Appliances for Sleepy Patients? How to Choose!