Obstructive Sleep Apnea: Therapeutic Choices in Sleep Apnea, Tailoring Treatment to the Patient

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Dr. Sorscher is a graduate of the University of Cincinnati College of Medicine, Ohio, and completed his family medicine residency at Ramsey County Hospital, St. Paul, Minnesota. He is board certified by the American Board of Family Medicine (ABFM) and the American Board of Sleep Medicine (ABSM). As a clinician, he divides his time equally between family medicine and sleep medicine. His special interests are helping primary care physicians effectively incorporate best practices in insomnia care and understanding how impaired sleep contributes to mood disorders. He is also a staunch supporter of publicly funded universal health care.

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Learning Objectives

1. Identify patients, based on risk factors, who need to be evaluated for obstructive sleep apnea.
2. Consider OSA in the differential diagnosis of a variety of clinical presentations including new onset hypertension and daytime fatigue.
3. Counsel patients to make lifestyle modifications that may relieve mild obstructive sleep apnea.
4. Counsel patients on strategies to encourage compliance with CPAP therapy for obstructive sleep apnea, and mandibular advancement devices as an alternative.

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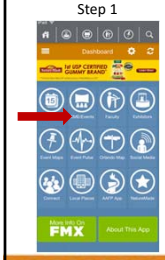
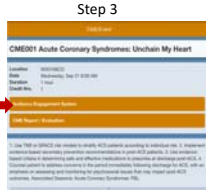
Audience Engagement System

Step 1



Step 2

Step 3



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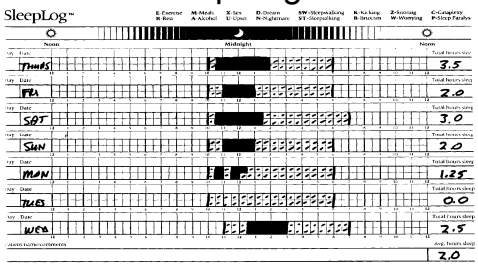
Sleep Logs



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Graphic sleep diary in insomnia patient (42 yr. F)

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Obstructive Sleep Apnea

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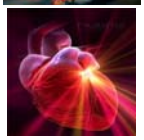
Consequences of OSA



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Stop-Bang Questions

1. Snoring: Do you snore loudly (louder than talking or loud enough to be heard through closed doors)?Yes No
2. *T*ired: Do you often feel *t*ired, fatigued, or sleepy during daytime? Yes No
3. Observed: Has anyone observed you stop breathing during your sleep? Yes No
4. Blood *p*ressure: Do you have or are you being treated for high blood *p*ressure? Yes No
5. *B*MI: BMI more than 35 kg/m^2? Yes No
6. *A*ge: Age over 50 yr old? Yes No
7. *N*eck circumference: *N*eck circumference greater than 40 cm? Yes No
8. Gender: Gender Male? Yes No

High risk of OSA: answering yes to three or more items
Low risk of OSA: answering yes to less than three items

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Poll Question

What percentage of people with moderate to severe OSA report hypersomnolence?

A. 25%
B. 45%
C. 65%
D. 85%

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Sleepiness is a Bit Mysterious

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Epworth Sleepiness Scale

Situation	Chance of Dozing or Sleeping (0-3)
Sitting and reading	___
Watching TV	___
Sitting inactive in a public place	___
Passenger in a motor vehicle for an hour or more	___
Lying down in the afternoon	___
Sitting and talking to someone	___
Sitting quietly after lunch (no alcohol)	___
Stopped for a few minutes in traffic while driving	___
Total score (add the scores up) (This is your Epworth score) **(>10 is abnormal)**	___

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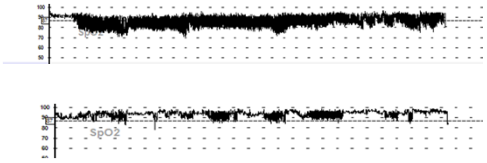
Screening with Oximetry?



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Polysomnography: A Relic???

- EEG x4
- Eyes x2
- Chin x1
- Legs x2
- EKG x 1
- Airflow x 2
- Oximetry x 1
- Strain gauges x2

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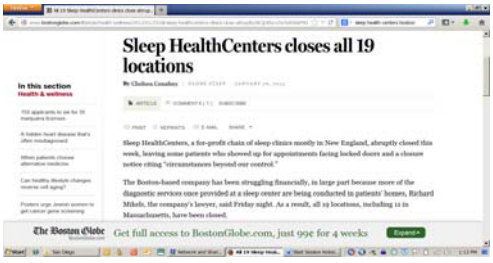

Sleep HealthCenters closes all 19 locations

In this section
Health & wellness

Sleep HealthCenters, a for-profit chain of sleep clinics mostly in New England, abruptly closed this week, leaving some patients who showed up for appointments facing locked doors and a closure notice citing "circumstances beyond our control."

The Boston-based company has been struggling financially, in large part because more of the diagnostic services once provided at a sleep center are being conducted in patients' homes, Richard Mikels, the company's lawyer, said Friday night. As a result, all 19 locations, including 12 in Massachusetts, have been closed.

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Poll Question

Which of the following is a contraindication to a home sleep test for sleep apnea?

A. Congestive heart failure

B. BMI > 35

C. History of hypertension

D. History of COPD

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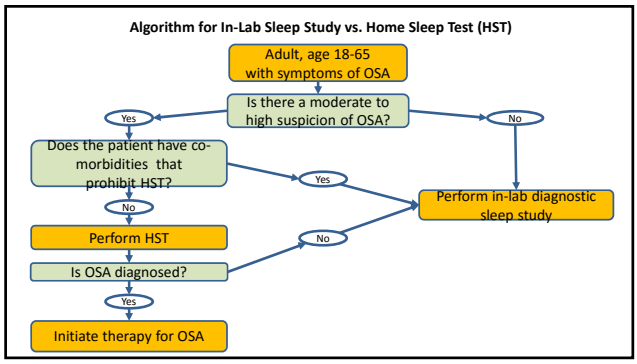
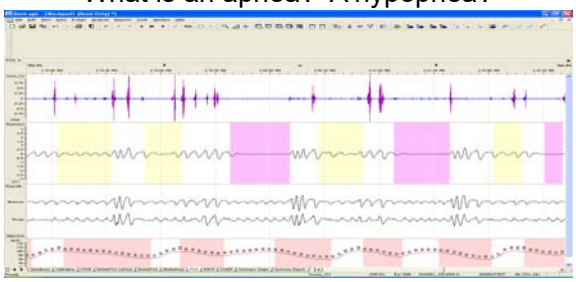


What is an apnea? A hypopnea?



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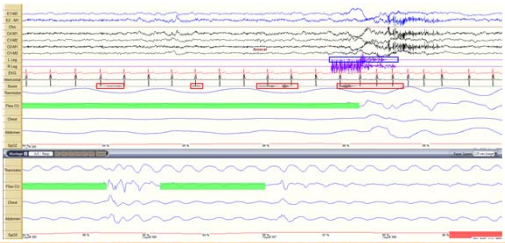
Still More Hypopneas



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Sleep Apnea Scoring:

Normal	<5
Borderline/mild	5-14
Moderate	15-29
Moderate/severe	31-50
Very severe	> 50

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Midpoint Q&A Slide

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Case #1: Very Mild OSA

- 51 yo woman with loud snoring
- No c/o EDS; no CADRFs or CV diagnoses
- AHI = 20

- Management recommendations????

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Case #2: Mild OSA. Therapeutic Options???

- 60 yo man
- AHI = 16 (medicare criteria)
- supine = 30; non supine = 8
- c/o loud snoring; not hypersomnolent
- Hx of hypertension
- BMI = 33
- Drinks 3 alcoholic beverages per night

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OSA: Alternatives to CPAP

- Medications:
- Weight Loss
- Avoid alcohol
- Body Positioning devices
- Oral appliances
- ENT surgery
- Provent

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Sleep Apnea Vest

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Dental Positioning Device

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ENT Surgery: The UPPP

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Provent

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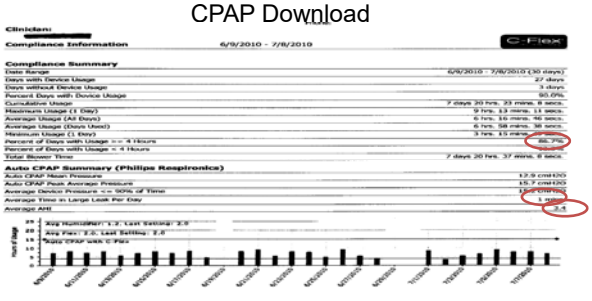
CPAP Download


Clinician:

Compliance Information 6/9/2010 - 7/8/2010 C-Flex

Compliance Summary

Date Range	6/9/2010 - 7/8/2010 (30 days)
Days with Device Usage	27 days
Days without Device Usage	3 days
Percent Days with Device Usage	90.0%
Cumulative Usage	7 days 20 hrs. 23 mins. 8 secs.
Maximum Usage (1 Day)	9 hrs. 13 mins. 11 secs.
Average Usage (All Days)	6 hrs. 16 mins. 46 secs.
Average Usage (Days Used)	6 hrs. 58 mins. 38 secs.
Minimum Usage (1 Day)	3 hrs. 15 mins. 27 secs.
Percent of Days with Usage >= 4 Hours	85.7%
Percent of Days with Usage < 4 Hours	14.3%
Total Blower Time	7 days 20 hrs. 37 mins. 8 secs.

Auto CPAP Summary (Philips Respironics)

Auto CPAP Mean Pressure	12.9 cmH2O
Auto CPAP Peak Average Pressure	15.7 cmH2O
Average Device Pressure <= 90% of Time	15.7 cmH2O
Average Time in Large Leak Per Day	1 min
Average AHI	3.4

Avg Humidifier: 1.2, Last Setting: 2.0
Avg Flex: 2.0, Last Setting: 2.0
Auto CPAP with C-Flex

Hours of Usage: 25, 20, 15, 10, 5, 0

M6/9/2010, M7/10/2010, M8/11/2010, M9/12/2010, M10/13/2010, M11/14/2010, M12/15/2010, M13/16/2010, M14/17/2010, M15/18/2010, M16/19/2010, T17/20/2010, T18/21/2010, T19/22/2010, T20/23/2010

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Case 4: Mod-Severe OSA

- 71 yo woman
- Hypersomnolence, afib, HTN
- BMI 35
- AHI 55; oxygen desaturation nadir 78%
- CPAP setting of 16 was prescribed
- Intolerant of CPAP!!! (smothering sensation/uncomfortable air leaks)

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Enhancing CPAP Compliance: General Measures

- Set Expectations
- Early follow up…Education about harms of OSA
- Treat rhinitis (humidity; nasal steroids)
- Sedative-hypnotic medication
- Heated humiditiy

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Enhancing Adherence: CPAP specific measures

- CPAP vs. APAP vs. VPAP
- NEW MASK!!!

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Categories of CPAP Masks

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OSA: Conclusions

- Good sleep is important; sleep apnea can ruin sleep
- There are many viable therapeutic options for OSA
- Management of OSA is more art than science

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And Now For Something Completely Different…..

From CPAP to
Sleep App

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Polling Question

Sleeping less than 7 hours is associated with all of the following except:

A. Depression
B. Weight Gain
C. Heart Disease and Stroke
D. Cancer
E. Increased Pain

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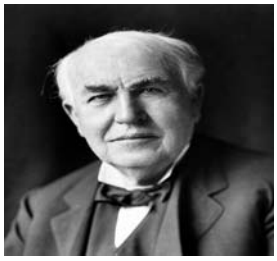

"Opportunity is missed by most people because it is dressed in overalls and looks like work."….

"There is no substitute for hard work"

"Genius is 10% inspiration and 90% perspiration"

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Key References

J Clin Sleep Med. 2007 Dec 15;3(7):737-47.
Clinical guidelines for the use of unattended portable monitors in the diagnosis of obstructive sleep apnea in adult patients. Portable Monitoring Task Force of the American Academy of Sleep Medicine.

Clinical Guideline for the Evaluation, Management and Long-term Care of Obstructive Sleep Apnea in Adults **…**
*www.aasmnet.org/Clinical**Guidelines**.aspx*

Sleep. 2003 Nov 1;26(7):907-13.
Practice parameters for the use of portable monitoring devices in the investigation of suspected obstructive sleep apnea in adults.

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Practice Recommendations

- Ask about sleep and advocate for making time for sleep
- Provide graphic sleep logs to chart estimated patterns of sleep and wake in people with sleep complaints.
- 60-70% of people with sleep apnea can be diagnosed and treated without the services of a sleep laboratory (proper patient selection and specialist backup for complex cases are needed)

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Questions

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Billing & Coding

When services performed in conjunction with:	
Office Visit	992xx *

*Time-based selection documentation criteria:

- Face-to-face time
- greater than 50% spent counseling/coordinating care

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