

Phone: 847-777-0000 Fax: 847.465.3401 support@SnapDiagnostics.com

# **RESPIRATORY ANALYSIS**

Name:	Sample Patient	Height:	5' 9"	
Birth Date:	xx/xx/yyyy	Weight:	222 lb	
Age:	xx years old	BMI:	32.8	
Sex:	Gender	Neck Circumference:	48.3 cm	
<b>Referred By:</b>	Sample Provider, MD	Service Date:	xx/xx/yyyy	
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Unattended, Type III, Home Sleep Study with simultaneous recording of heart/pulse rate, oxygen saturation, respiratory airflow and respiratory effort.

History: Habitual loud snoring and Epworth scale greater than 9.

### Comment:

Recording Time: 362 min

# Analyzed Sleep Time: 344 min

RESPIRATORY FINDINGS:					
APNEAS		HYPOPNEAS		CALCULATED INDICES	
Total Number of Apneas:	58	Total Number of Hypopneas:	294	Total Apnea Index:	10.1
Num. of OBS Apneas:	35	Num. of Hypopneas 4%:	268	Hypopnea Index:	51.3
Num. of Central Apneas:	23			Hypopnea 4% Index:	46.7
Avg. Apnea Duration:	20 sec	Avg. Hypopnea Duration:	23 sec	Central Apnea Index:	4.0 (7%)
OVIM	MaxDen10 <sub>RDI</sub> :	104.6			
OXIM		REI 4%:	54.0		
Time below 88%: 75 min 2	2 %	Oximetry baseline:	98 %	AHI 4%:	56.9
Number of desaturations:	340	Lowest desaturation:	73 %	AHI 3% (RDI):	61.4

## **RESPIRATORY ANALYSIS SUMMARY**

A total of 58 apneas (23 of which were Central based on respiratory effort) and 294 hypopneas were identified. The total number of obstructive events (apneas and hypopneas) was 352. The Total Apnea Index (central and obstructive events) was 10.1 per hour. The Central Apnea Index was 4.0 per hour based on respiratory effort. The Central % Ratio was 7%.

During the recording period, there was a total of 340 desaturations. The baseline oxygen level was 98% and the lowest oxygen level was 73%. The time spent below an oxygen saturation of 88% was 75 min 22%.

The AHI 3% (RDI) was 61.4 per hour. During periods of the recording the Maximum Density of the AHI 3% (RDI) was elevated up to 104.6. The AHI 4% was 56.9 per hour; this index includes hypopneas that exhibit oxygen desaturations of 4% or greater, and all apneas.

## **INTERPRETATION:**

During the recording there was evidence of severe obstructive sleep apnea (OSA). There was evidence of severe oxygen desaturation. Specifically, the time that the SpO2 was below 88% was 75 min (22%).

Physician Signature

**Date Signed** 



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Unattended, Type III, Home Sleep Study with simultaneous recording of heart/pulse rate, oxygen saturation, respiratory airflow and respiratory effort.			

# **CONSIDERATIONS:**

The following considerations represent clinical guidelines published by the American Academy of Sleep Medicine (AASM) and the American Academy of Dental Sleep Medicine (AADSM):

**Positive Airway Pressure (PAP) Therapy:** Positive Airway Pressure is the treatment of choice for mild, moderate and severe obstructive sleep apnea (OSA) and should be offered as an option for all patients. Alternative therapies may be offered depending on the severity of OSA and the patient's anatomy, risk factors and preferences (Epstein et al., 2009; Caples et al., 2021).

- If continuous positive airway pressure (CPAP) therapy is considered appropriate, the predicted initial CPAP pressure is **10 cm H2O** (Miljeteig & Hoffstein, 1993). If auto-titrating PAP is considered appropriate, the treating pressure will be determined by the device's internal software.
- If PAP therapy is considered appropriate, a unique patient identification number may be used by the treatment provider to enable automatic tracking of PAP compliance for some PAP manufacturers on the Snap Diagnostics patient portal. The PAP Compliance Reporting Identification Number for this patient is #######.

**Oral Appliance Therapy:** The AASM and AADSM recommend the use of a custom, titratable oral appliance for (a) patients with primary snoring or (b) patients who are either intolerant to PAP or who prefer alternative therapies (Ramar et al., 2015). Follow-up testing should be performed to identify necessary adjustments and ensure adequate control of OSA (Caples et al., 2021). Prior to a trial of oral appliance therapy, patients with severe OSA should have an initial trial of nasal CPAP (Epstein et al., 2009).

**Surgical Procedures:** Surgical procedures may be considered as a secondary treatment for obstructive sleep apnea when outcome on PAP is inadequate or the patient is PAP-intolerant. Follow-up testing is recommended to ensure adequate control of OSA (Epstein et al., 2009; Caples et al., 2021).

**Weight Management:** Successful dietary weight loss may improve apnea severity in obese patients with OSA (Epstein et al., 2009; Caples et al., 2021).

**Follow-up Testing:** Follow-up testing is recommended to assess response to non-PAP treatment interventions.

NOTE: Follow-up testing may also be appropriate for patients on PAP therapy if: (a) symptoms persistent or return despite good adherence to PAP treatment, (b) there is an unexplained change in PAP adherence or unexplained PAP-device generated data, (c) clinically significant weight gain or loss has occurred since diagnosis of OSA or initiation of treatment, (d) hypoxia and/or hypoventilation persist or develop, or (e) patient has a change in cardiovascular disease (Epstein et al., 2009; Ramar et al., 2015; Caples et al., 2021).

References available upon request.

This home sleep test was completed after (1) face-to-face demonstration of the portable sleep monitoring device's application and use; or (2) the patient was provided with a training video and/or telephonic instruction. Snap Diagnostics provides 24 hour availability of qualified personnel to provide assistance during testing.



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# **OXIMETRY ANALYSIS**

Name:	Sample Patient	Height:	5' 9"
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Age:	xx years old	BMI:	32.8
Sex:	Gender	Neck Circumference:	48.3 cm
<b>Referred By:</b>	Sample Provider	Service Date:	xx/xx/yyyy
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Unattended, Type III, Home Sleep Study with simultaneous recording of heart/pulse rate, oxygen saturation, respiratory airflow and respiratory effort.

**<u>History</u>**: Habitual loud snoring and Epworth scale greater than 9.

Recording Time 362 min

Recording Oximetry Time 342 min

Oximetry Baseline was 98 %

Oximetry Data:		SpO2 Levels by Time:
Mean O2:	91 %	95 - 100: 18 % 62 min
Highest O2:	98 %	90 - 94: 52 % 178 min
Lowest O2:	73 %	85 - 89: 17 % 58 min
Number of Desaturations:	340	80 - 84: 10 % 34 min
O2 Desaturation Index (ODI)	59.6	75 - 79: 3 % 10 min
Time under 88%:	22 % 75 min	70 - 74: <0.5 % <0.5 min
Mean Pulse Rate:	73 bpm	Under 70: 0 % 0 min

# **OXIMETRY SUMMARY:**

During the recording period:

- Total of 340 desaturations.
- The Desaturation Index was 59.6
- Oxygen level was under 88% for 22 % of the time.
- Lowest O2 level was 73 %.



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# **SNORING ANALYSIS**

Name:	Sample Patient	Height:	5' 9"
Birth Date:	xx/xx/yyyy	Weight:	222 lb
Age:	xx years old	BMI:	32.8
Sex:	Gender	Neck Circumference:	48.3 cm
Referred By:	Sample Provider	Service Date:	xx/xx/yyyy
Upattondod Type II	Lemo Sloop Study with simultaneous recording of heart/pulse rate	ovugon saturation respiratory airf	low and recoiratory offer

Unattended, Type III, Home Sleep Study with simultaneous recording of heart/pulse rate, oxygen saturation, respiratory airflow and respiratory effort.

#### Comment:

## **Snoring Data:**

	<b>Overall Snoring</b>	<u> Loudness:</u>
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Snoring Index:	161.0	M
Primary Vibration Frequency:	19 Hz	A۱
Palatal like Vibration Freq:	19 Hz	
(type1,2)		

Max Relative Loudness: 0 dB (Mild degree)
Average Relative Loudness: 0 dB (Mild degree)

Snoring Distribution by Type:			pe:	Snoring Distribution by Loudness:
Туре	1:	63	91 %	Ampl.Dist.Index(RESP85%): 0 dB (Mild)
Туре	2:	4	6 %	Ampl.Dist.Index(34W85%): 0 dB (Mild)
Туре	3:	2	3 %	
Туре	4:	0	0 %	Resistance Occurrence Percentage 41 %
Type \	WL:	0	0 %	(% of respiratory events with 1-4 or WL Type sound)

### **SNORING ANALYSIS SUMMARY:**

The patient snored at a rate of approximately 161.0 snores per hour.

The **snoring distribution** suggests that vibration patterns which are similar to typical palatal snoring patterns (type 1,2), dominated 97 % of the snoring events.

The **maximum relative snoring loudness** (increase over respiratory baseline) was measured to be approximately 0 dB (Mild degree).

The **average relative snoring loudness** (increase over respiratory baseline) was measured to be approximately 0 dB (Mild degree).

The **typical palatal snoring patterns** were 0 dB louder than all other respiratory sounds, and in particular 0 dB louder than the non palatal snoring events.

## Estimated Palatal Component



