



### RESPIRATORY ANALYSIS

|                     |                       |                            |            |
|---------------------|-----------------------|----------------------------|------------|
| <b>Name:</b>        | SAMPLE PATIENT        | <b>Height:</b>             | 5' 11"     |
| <b>Birth Date:</b>  | 03/27/1964            | <b>Weight:</b>             | 250 lb     |
| <b>Age:</b>         | 55 years old          | <b>BMI:</b>                | 34.9       |
| <b>Sex:</b>         | male                  | <b>Neck Circumference:</b> | 43.2 cm    |
| <b>Referred By:</b> | SAMPLE PROVIDER, M.D. | <b>Service Date:</b>       | 08/15/2018 |

**History:** Observed apneas, hypertension, loud snoring and gasping during sleep.

**Comment:**

**Total Recording Time:** 355 min

**Analyzed Sleep Time:** 343 min

| RESPIRATORY FINDINGS:         |                                |                                  |
|-------------------------------|--------------------------------|----------------------------------|
| APNEAS                        | HYPOPNEAS                      | CALCULATED INDICES               |
| Total Number of Apneas: 71    | Total Number of Hypopneas: 189 | Total Apnea Index: 12.4          |
| Num. of OBS Apneas: 67        | Num. of Hypopneas 4%: 126      | Hypopnea Index: 33.1             |
| Num. of Central Apneas: 4     |                                | Hypopnea 4% Index: 22.0          |
| Avg. Apnea Duration: 31 sec   | Avg. Hypopnea Duration: 34 sec | Central Apnea Index: 0.7 (1.5 %) |
| <b>OXIMETRY DESATURATIONS</b> |                                | MaxDen10 <sub>RDI</sub> : 80.0   |
|                               |                                | REI: 33.3                        |
| Time below 88%: 24 min (7%)   | Oximetry baseline: 99 %        | <b>AHI: 34.5</b>                 |
| Number of desaturations: 196  | Lowest desaturation: 74 %      | RDI: 45.5                        |

#### RESPIRATORY ANALYSIS SUMMARY

A total of 71 apneas (4 of which were Central) and 189 hypopneas were identified. The total number of obstructive events (apneas and hypopneas) was 256. The Total Apnea Index (central and obstructive events) was 12.4 per hour. The Central Apnea Index was 0.7 per hour. The Central % Ratio was 1.5%.

During the recording period, there was a total of 196 desaturations. The baseline oxygen level was 99% and the lowest oxygen level was 74%. The time spent below an oxygen saturation of 88% was 24 min (7%).

The RDI was 45.5 per hour. During periods of the recording no less than ten minutes, the Maximum Density of the RDI was elevated up to 80.0. The AHI was 34.5 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 sleep apnea; there was evidence of significant oxygen desaturation. Specifically, the time that the SpO2 was below 88% was 24 min (7%).

Sample Medical Director MD

8 / 18 / 2018

Date Signed



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### **CONSIDERATIONS:**

The following considerations represent clinical guidelines published by American Academy of Sleep Medicine. They are intended for a medical provider familiar with the patient history to consider if that medical provider elects to treat this patient.

Positive Airway Pressure (PAP) is the treatment of choice for mild, moderate and severe OSA and should be offered as an option for all patients (Consensus). Alternative therapies may be offered depending on the severity of the OSA and the patient's anatomy, risk factors and preferences (Epstein et al. AASM Clinical Guideline. J Clin Sleep Med. 2009: 5[3]).

The AASM and AADSM recommend the use of a custom, titratable Oral Appliance for (a) patients with primary snoring or (b) patients that are either not tolerant of PAP or that prefer an alternative to PAP versus no treatment (AASM & AADSM Clinical Practice Guideline, J Clin Sleep Med. 2015;11[7]).

Note: Prior to a trial of Oral Appliance, patients with severe OSA should have an initial trial of nasal CPAP because greater effectiveness has been shown with this intervention than the use of Oral Appliances (Epstein et al. AASM Clinical Guideline. J Clin Sleep Med. 2009: 5[3]).

Successful dietary weight loss may improve the RDI in obese patients with OSA (Epstein et al., 2009).

Consider surgical procedures as a secondary treatment for obstructive sleep apnea when outcome on PAP is inadequate or the patient is PAP-intolerant (Epstein et al., 2009).

If treatment includes oral appliance, surgical procedure or weight loss, consider repeating sleep test to assess therapy effectiveness (Epstein et al., 2009; Ramar et al., 2015).

If CPAP therapy is considered appropriate, the predicted initial CPAP pressure is 9 cm H<sub>2</sub>O (Miljeteig and Hoffstein, 1993). If Auto-titrating PAP is considered appropriate, the treating pressure will be selected by the device's internal software.



## OXIMETRY ANALYSIS

|                     |                       |                            |            |
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| <b>Referred By:</b> | SAMPLE PROVIDER, M.D. | <b>Service Date:</b>       | 08/15/2018 |

**History:** Observed apneas, hypertension, loud snoring and gasping during sleep.

**Total Recording Time:** 355 min

**Recorded Oximetry Time:** 342 min

Oximetry Baseline was 99 %

### Oximetry Data:

|                          |            |
|--------------------------|------------|
| Mean O2:                 | 92 %       |
| High O2:                 | 99 %       |
| Number of Desaturations: | 196        |
| Lowest O2:               | 74 %       |
| Time under 88%:          | 7 % 24 min |
| Mean Pulse Rate:         | 62 bpm     |

### SpO2 Levels by Time:

|           |        |          |
|-----------|--------|----------|
| 95 - 100: | 15 %   | 51 min   |
| 90 - 94:  | 73 %   | 250 min  |
| 85 - 89:  | 9 %    | 31 min   |
| 80 - 84:  | 3 %    | 10 min   |
| 75 - 79:  | <0.5 % | <0.5 min |
| 70 - 74:  | <0.5 % | <0.5 min |
| Under 70: | 0 %    | 0 min    |

### OXIMETRY SUMMARY:

During the recording period:

- Total of 196 desaturations.
- Oxygen level was under 88% for 7 % of the time.
- Lowest O2 level was 74 %.



## SNORING ANALYSIS

|                     |                       |                            |            |
|---------------------|-----------------------|----------------------------|------------|
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### Comment:

#### Snoring Data:

Snoring Index: 543.0  
 Primary Vibration Frequency: 80 Hz  
 Palatal like Vibration Freq: 80 Hz  
 (type1,2)

#### Overall Snoring Loudness:

Max Relative Loudness: 19 dB (Moderate degree)  
 Average Relative Loudness: 12 dB (Moderate degree)

#### Snoring Distribution by Type:

|                 |     |      |
|-----------------|-----|------|
| <b>Type 1:</b>  | 108 | 88 % |
| <b>Type 2:</b>  | 11  | 9 %  |
| <b>Type 3:</b>  | 4   | 3 %  |
| <b>Type 4:</b>  | 0   | 0 %  |
| <b>Type WL:</b> | 0   | 0 %  |

#### Snoring Distribution by Loudness:

Ampl.Dist.Index(RES85%): **19 dB (Marked)**  
 Ampl.Dist.Index(34W85%): **19 dB (Marked)**  
 Resistance Occurrence Percentage 69 %  
 (% of respiratory events with 1-4 or WL Type sound)

### SNORING ANALYSIS SUMMARY:

The patient **snored at a rate** of approximately 543.0 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 19 dB (Moderate degree).

The **average relative snoring loudness** (increase over respiratory baseline) was measured to be approximately 12 dB (Moderate degree).

The **typical palatal snoring patterns** were 19 dB louder than all other respiratory sounds, and in particular 19 dB louder than the non palatal snoring events.

### Estimated Palatal Component

