

Sleep Profiler PSG2 Study Report Summary

Patient Name Me! **Study Ordered by**
Board Certified in Sleep Medicine

Date of Night 1 26 Sep 2021 **Date of Birth**
Date of Night 2 27 Sep 2021 **Study Type** Diagnostic
Date of Night 3 28 Sep 2021

CLINICAL HISTORY: 21 year old male

STUDY FINDINGS: The patient underwent a three-night overnight type II polysomnography.

NIGHT ONE - Sleep Disordered Breathing: Based on total sleep time of 6.7 hours and 3% desaturation criteria, the overall apnea-hypopnea index (AHI) was 2.4, supine AHI was 3.7, and non-supine AHI was 2.3. The NREM AHI was 2.6, and REM AHI was 1.4. The Overall AHI - 3% desats + arousals was 3.4. The oxygen desaturation index (ODI) was 2.4, the lowest respiratory event related desaturation was 92.0%, and the SpO2 was less than 90% for 0.0 minutes, and less than 88% for 0.0 minutes.

Sleep Architecture: The recording time of 8.1 hours and total sleep time of 6.7 hours resulted in a sleep efficiency of 82.6%. The patient fell asleep 3 minutes after the lights were turned off, started stage N3 2 minutes later, and entered his first REM cycle 137 minutes later. He slept 8.9% of the night in stage N1, 5.0% in light N2, 34.6% in total N2, 35.4% in slow-wave sleep (stage N3), and 21.1% in REM.

Awakenings and Arousals: The patient was awake for a total 82 minutes after initially falling asleep. He experienced an average of 6.7 awakenings > 30 sec and 2.0 awakenings > 90 sec per hour of sleep. He experienced an average of 11.0 cortical arousals, 30.5 autonomic activations, and 4.8 movement arousals per hour of sleep.

Other: He slept 8.1% of the night supine, while snoring 45.3% of the night above 40 dB and 3.0% above 50 dB.

Abnormal Sleep Patterns: The patient's percentage of time in stage N1, REM latency, and awakening index were outside age/gender-matched normative ranges.

NIGHT TWO - Sleep Disordered Breathing: Based on total sleep time of 9.3 hours and 3% desaturation criteria, the overall apnea-hypopnea index (AHI) was 0.9, supine AHI was 0.0, and non-supine AHI was 0.8. The NREM AHI was 0.9, and REM AHI was 0.8. The Overall AHI - 3% desats + arousals was 1.8. The oxygen desaturation index (ODI) was 1.2, the lowest respiratory event related desaturation was 91.0%, and the SpO2 was less than 90% for 0.0 minutes, and less than 88% for 0.0 minutes.

Sleep Architecture: The recording time of 11.0 hours and total sleep time of 9.3 hours resulted in a sleep efficiency of 84.4%. The patient fell asleep 17 minutes after the lights were turned off, started stage N3 32 minutes later, and entered his first REM cycle 95 minutes later. He slept 8.8% of the night in stage N1, 5.8% in light N2, 37.6% in total N2, 26.0% in slow-wave sleep (stage N3), and 27.5% in REM.

Awakenings and Arousals: The patient was awake for a total 85 minutes after initially falling asleep. He experienced an average of 4.8 awakenings > 30 sec and 1.8 awakenings > 90 sec per hour of sleep. He experienced an average of 10.3 cortical arousals, 24.1 autonomic activations, and 3.9 movement arousals per hour of sleep.

Other: He slept 0.3% of the night supine, while snoring 29.1% of the night above 40 dB and 2.9% above 50 dB.

Abnormal Sleep Patterns: The patient's percentage of time in stage N1 was outside age/gender-matched normative ranges.

NIGHT THREE - Sleep Disordered Breathing: Based on total sleep time of 7.0 hours and 3% desaturation criteria, the overall apnea-hypopnea index (AHI) was 2.3, supine AHI was 4.2, and non-supine AHI was 2.2. The NREM AHI was 1.8, and REM AHI was 3.5. The Overall AHI - 3% desats + arousals was 2.7. The oxygen desaturation index (ODI) was 1.9, the lowest respiratory event related desaturation was 90.0%, and the SpO2 was less than 90% for 0.0 minutes, and less than 88% for 0.0 minutes.

Sleep Architecture: The recording time of 9.1 hours and total sleep time of 7.0 hours resulted in a sleep efficiency of 76.8%. The patient fell asleep 37 minutes after the lights were turned off, started stage N3 11 minutes later, and entered his first REM cycle 76 minutes later. He slept 9.0% of the night in stage N1, 8.6% in light N2, 34.2% in total N2, 28.0% in slow-wave sleep (stage N3), and 28.7% in REM.

Awakenings and Arousals: The patient was awake for a total 90 minutes after initially falling asleep. He experienced an average of 6.9 awakenings > 30 sec and 2.2 awakenings > 90 sec per hour of sleep. He experienced an average of 10.1 cortical arousals, 22.0 autonomic activations, and 4.3 movement arousals per hour of sleep.

Other: He slept 3.4% of the night supine, while snoring 13.6% of the night above 40 dB and 0.3% above 50 dB.

Abnormal Sleep Patterns: The patient's percentage of time in stage REM, and N1, sleep latency, and awakening index were outside age/gender-matched normative ranges.

CLINICIAN COMMENTS:

Significant sleep disordered breathing and/or hypoxemia was not observed. If clinical suspicion for a sleep disorder persists, consider further evaluation such as in-lab polysomnogram and/or multiple sleep latency test.

Signature:

Date: 12 Oct 2021

Study Review: The overnight EEG and other signals have been reviewed by, D.O..

Traceability: ff7cab85-d156-4bdd-a2ec-9d9c39a76f98____20211012_135924_0000243000447

Study Results

Patient Name		Ordered by	Board Certified in Sleep Medicine
Date of Birth		Gender	Male

	N1: Diagnostic	N2: Diagnostic	N3: Diagnostic	Normal Ranges
Study Date	26 Sep 2021	27 Sep 2021	28 Sep 2021	Low/High
Study Time	10.4h	11.0h	9.4h	-
Excluded Time	2.3h	0.1h	0.3h	-
Recording Time	8.1h	11.0h	9.1h	-
Sleep Time	6.7h	9.3h	7.0h	<u>4.2h / 7.1h</u>
Sleep Efficiency (%)	82.6%	84.4%	76.8%	<u>73.2% / 93.3%</u>
Sleep Time Supine (%)	8.1% (0.5h)	0.3% (0.0h)	3.4% (0.2h)	-
Sleep Architecture				
Wake	17.4% (1.4h)	15.6% (1.7h)	23.2% (2.1h)	-
Stage R (REM) Total	21.1% (1.4h)	27.5% (2.5h)	28.7% (2.0h)	<u>14.6% / 28.4%</u>
Phasic	8.1% (0.5h)	11.7% (1.1h)	16.7% (1.2h)	<u>8.6% / 15.0%</u>
Stage N1	8.9% (0.6h)	8.8% (0.8h)	9.0% (0.6h)	<u>1.8% / 7.5%</u>
Stage N2 Total	34.6% (2.3h)	37.6% (3.5h)	34.2% (2.4h)	41.0% / 68.9%
Light	5.0% (0.3h)	5.8% (0.5h)	8.6% (0.6h)	<u>7.3% / 20.9%</u>
Stage N3 (SWS)	35.4% (2.4h)	26.0% (2.4h)	28.0% (2.0h)	<u>5.6% / 32.2%</u>
Sleep-NOS	0.0% (0.0h)	0.0% (0.0h)	0.0% (0.0h)	-
Latencies				
Sleep Latency	3m	17m	37m	3.5m / <u>36.0m</u>
REM Latency	137m	95m	76m	<u>43.0m / 121.5m</u>
Stage N3 Latency	2m	32m	11m	-
Wake after Sleep Onset	82m	85m	90m	0.0m / <u>45.0m</u>
Sleep Continuity				
Cortical Arousals/hr	11.0	10.3	10.1	7.4 / <u>22.1</u>
Microarousals/hr - other	2.8	3.0	3.1	-
Autonomic Activations/hr Overall	30.5	24.1	22.0	<u>11.4 / 36.0</u>
(Forehead) Non-REM	26.8	19.6	18.8	-
REM	44.5	36.0	30.7	-
Movement Arousals/hr	4.8	3.9	4.3	-
Awakenings/hr ≥ 30 sec	6.7	4.8	6.9	2.4 / <u>5.6</u>
≥ 90 sec	2.0	1.8	2.2	0.9 / <u>1.9</u>
Spindle Duration (min)	2.7	4.2	2.3	<u>2.2m / 13.1m</u>
Respiratory				
Overall AHI - 3% desat + arousals (events)	3.4 (23)	1.8 (17)	2.7 (19)	< 5
Supine (events)	7.4 (4)	0.0 (1)	4.2 (1)	-
Non-supine (events)	3.1 (19)	1.7 (16)	2.7 (18)	-
NREM (events)	3.4 (18)	1.9 (13)	2.4 (12)	-
REM (events)	3.5 (5)	1.6 (4)	3.5 (7)	-
Overall AHI - 3% desat (events)	2.4 (16)	0.9 (8)	2.3 (16)	-
Supine (events)	3.7 (2)	0.0 (1)	4.2 (1)	-
Non-supine (events)	2.3 (14)	0.8 (7)	2.2 (15)	-
NREM (events)	2.6 (14)	0.9 (6)	1.8 (9)	-
REM (events)	1.4 (2)	0.8 (2)	3.5 (7)	-
Apnea Index (events)	0.7 (5)	0.0 (0)	1.0 (7)	-
Obstructive Index (events)	0.7 (5)	0.0 (0)	1.0 (7)	-
Mixed Index (events)	0.0 (0)	0.0 (0)	0.0 (0)	-
Central Index (events)	0.0 (0)	0.0 (0)	0.0 (0)	-
Oxygen Desat ≥ 3% Index (events)	2.4 (16)	1.2 (11)	1.9 (13)	-
Desaturation				
Sleep time SpO2 < 90%	0m	0m	0m	-
Sleep time SpO2 < 88%	0m	0m	0m	-
Lowest desaturation respiratory event	92.0%	91.0%	90.0%	-
Mean SpO2 ±1 S.D.	97 ± 0.9%	98 ± 1.0%	97 ± 1.0%	-

Snoring				
> 40dB > 50dB				Max
Overall	45.3% 3.0%	29.1% 2.9%	13.6% 0.3%	<u>17.9%</u> <u>9.0%</u>
Supine	49.8% 26.6%	70.8% 0.0%	4.8% 0.0%	<u>31.2%</u> <u>13.1%</u>
Non Supine	44.9% 0.9%	29.0% 2.9%	13.9% 0.3%	<u>14.1%</u> <u>7.4%</u>
Cardio				
Mean ECG ±1 S.D. (BPM)	57 ± 6.5	54 ± 7.0	52 ± 6.7	-
Mean Pulse ±1 S.D. (BPM)	58 ± 5.6	54 ± 5.7	53 ± 5.3	-
Max Pulse Min Pulse (BPM)	101 47	83 43	79 43	-

Patient Name

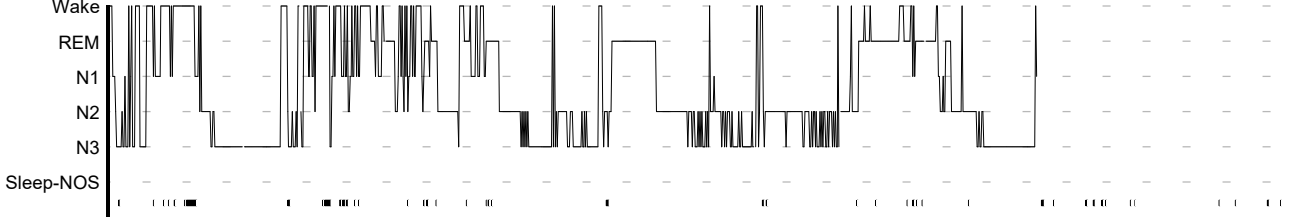
Gender

Male

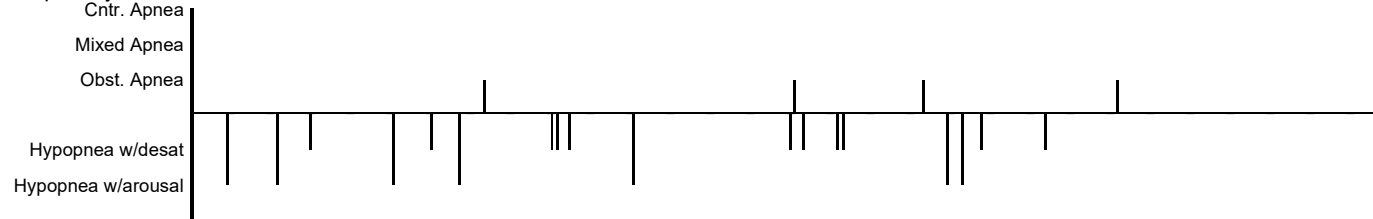
Date of Night 1 26 Sep 2021

Date of Birth

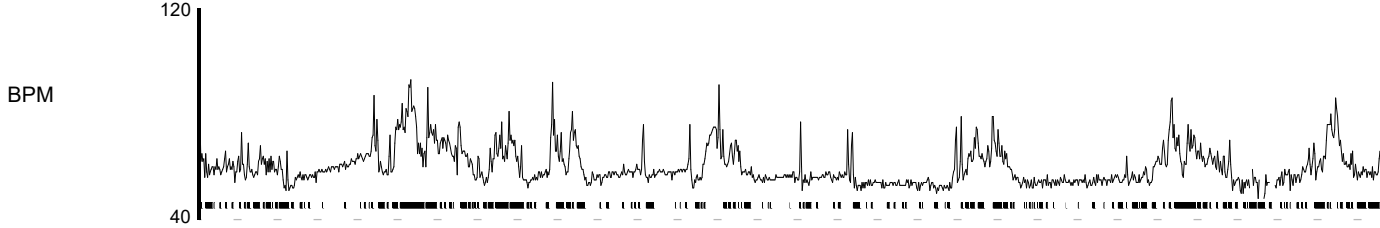
Sleep Staging by EEG with cortical arousals



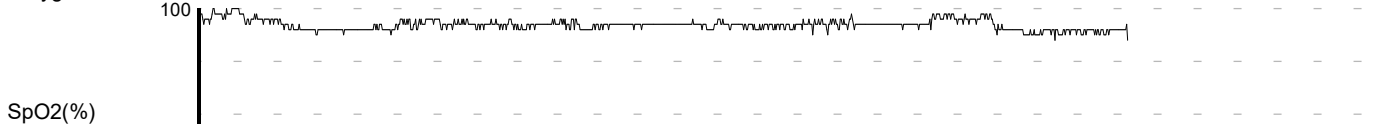
Respiratory Events



Pulse Rate with autonomic activations



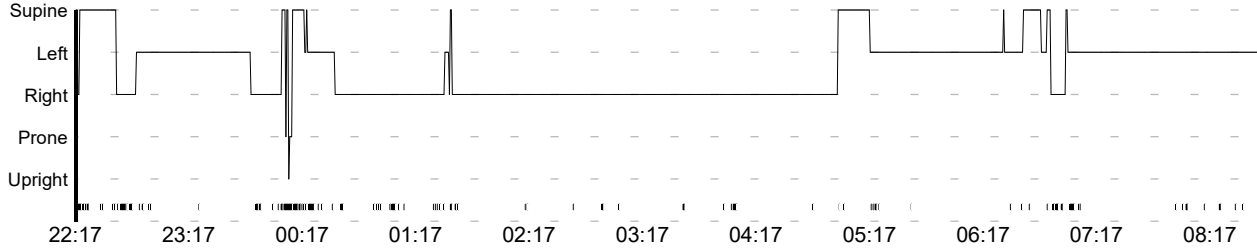
Oxygen Saturation with desaturation events



Snoring Level



Head Position with movement arousals



Sensor Impedance Values

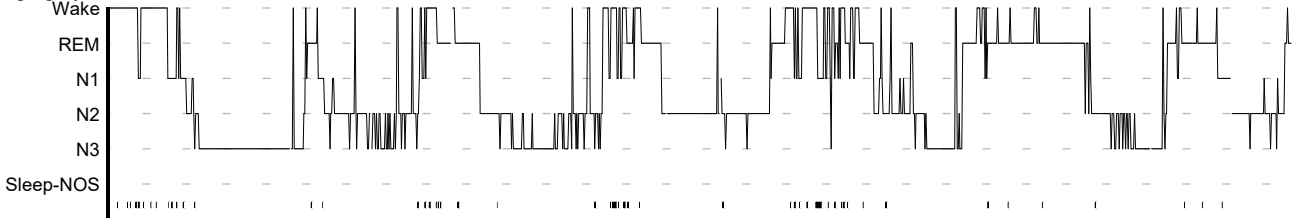


% Good Signal: EEG 96% LEOG 96% REOG 97% Pulse 99% Airflow 100% SpO2 79%

Patient Name
Date of Night 2 27 Sep 2021

Gender Male
Date of Birth

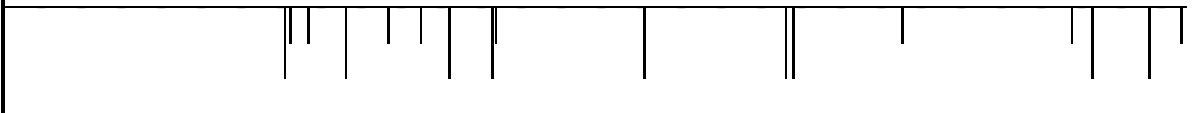
Sleep Staging by EEG with cortical arousals



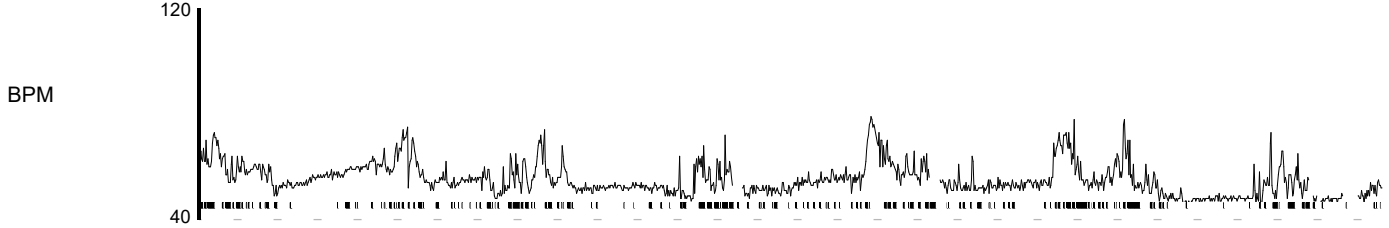
Respiratory Events

Cntr. Apnea
Mixed Apnea
Obst. Apnea

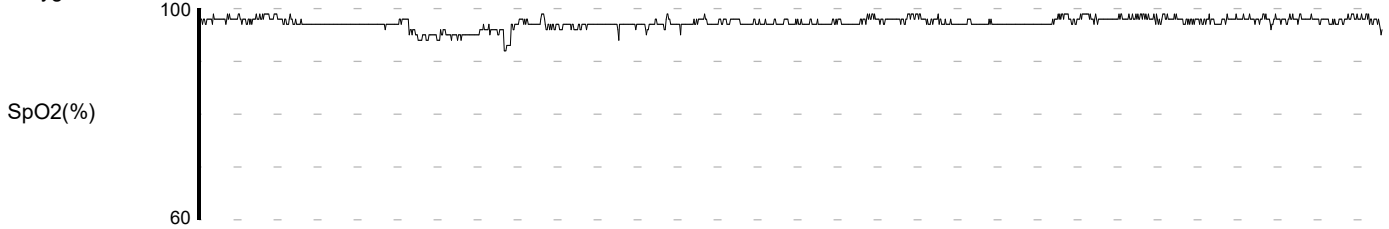
Hypopnea w/desat
Hypopnea w/arousal



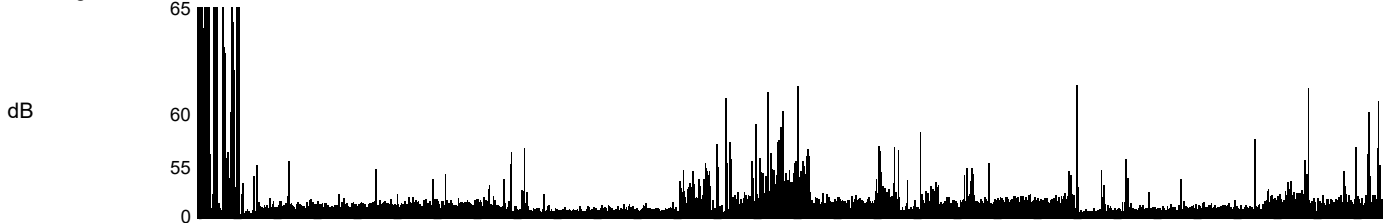
Pulse Rate with autonomic activations



Oxygen Saturation with desaturation events

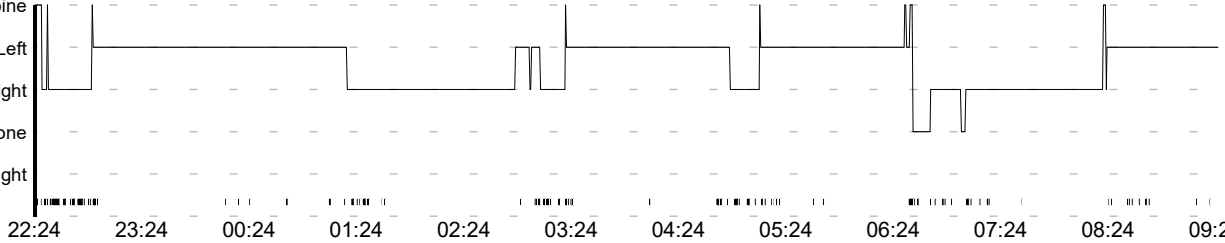


Snoring Level



Head Position with movement arousals

Supine
Left
Right
Prone
Upright



Sensor Impedance Values

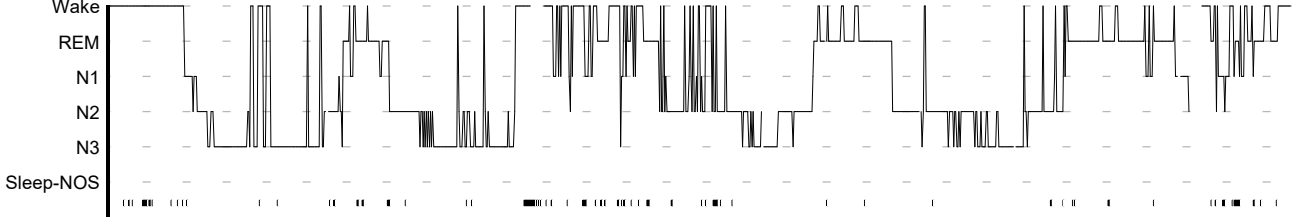


% Good Signal: EEG 97% LEOG 97% REOG 98% Pulse 97% Airflow 100% SpO2 100%

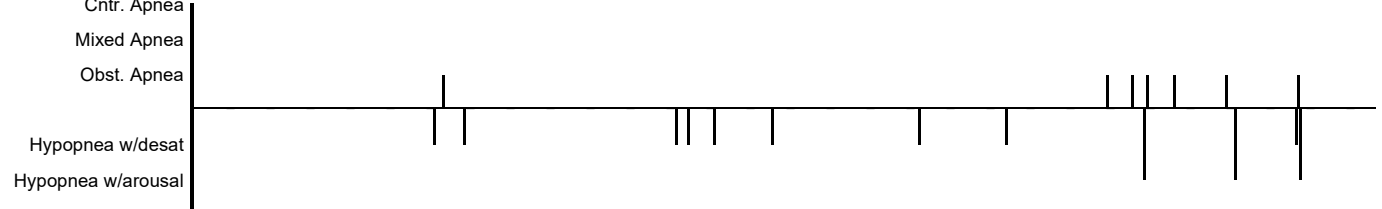
Patient Name
Date of Night 3 28 Sep 2021

Gender Male
Date of Birth

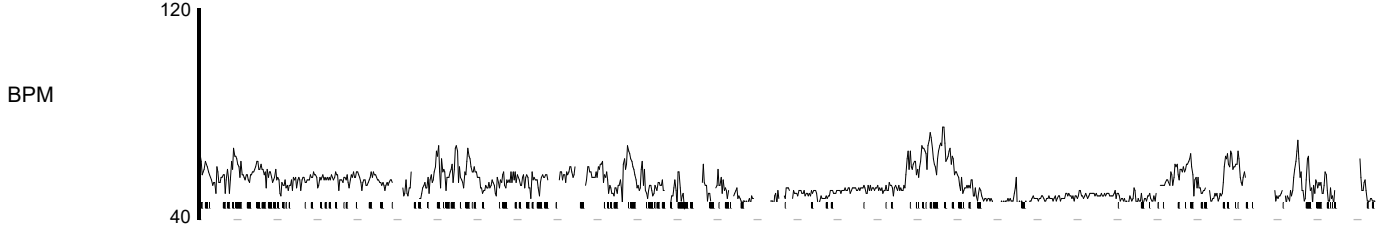
Sleep Staging by EEG with cortical arousals



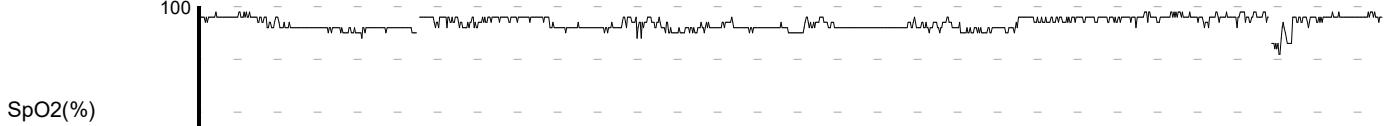
Respiratory Events



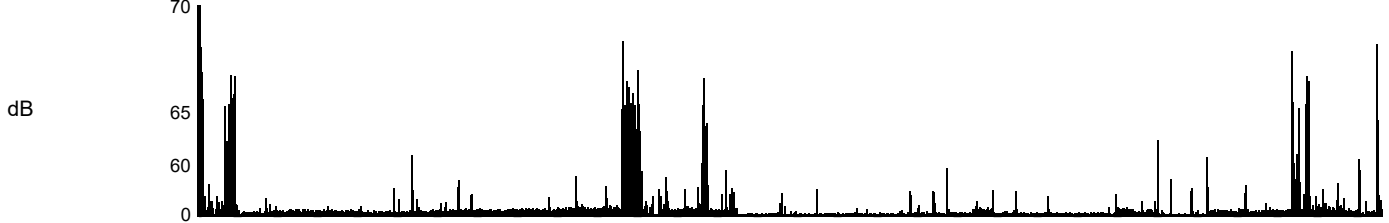
Pulse Rate with autonomic activations



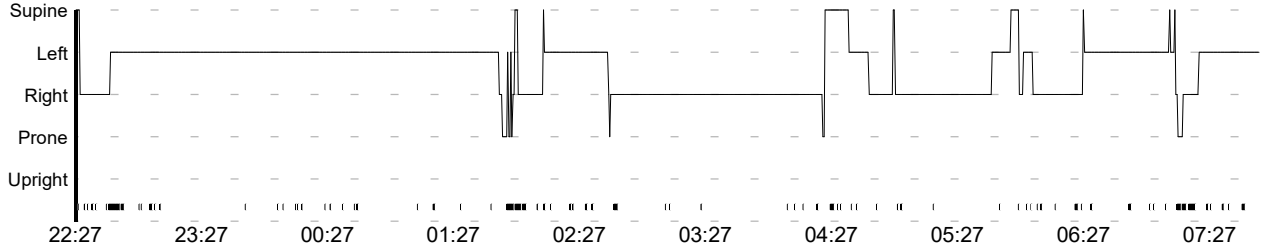
Oxygen Saturation with desaturation events



Snoring Level



Head Position with movement arousals



Sensor Impedance Values



% Good Signal: EEG 98% LEOG 97% REOG 97% Pulse 88% Airflow 98% SpO2 100%

Patient Report Night 1

Patient Name

Date of Night 1

26 Sep 2021

SLEEP APNEA SEVERITY

Overall Apnea Hypopnea Index (3% Desats): average of 2.4 events per hour when asleep



Overall AHI (3% Desats + Arousals): average of 3.4 events per hour when asleep



Positional Severity

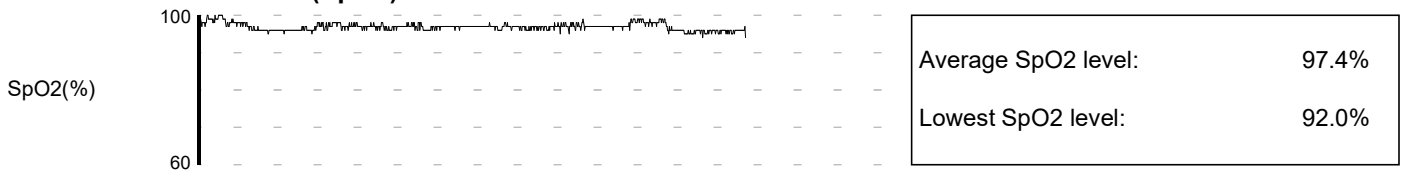
Supine Apnea Hypopnea Index: average of 3.7 events per hour when back-sleeping



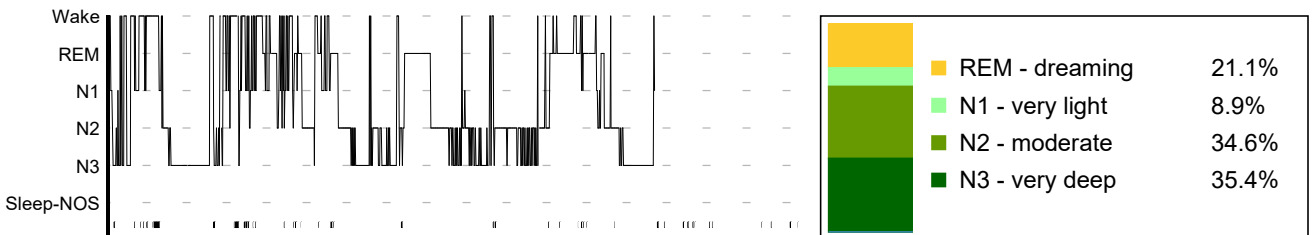
Non-Supine Apnea Hypopnea Index: average of 2.3 events per hour when NOT back-sleeping



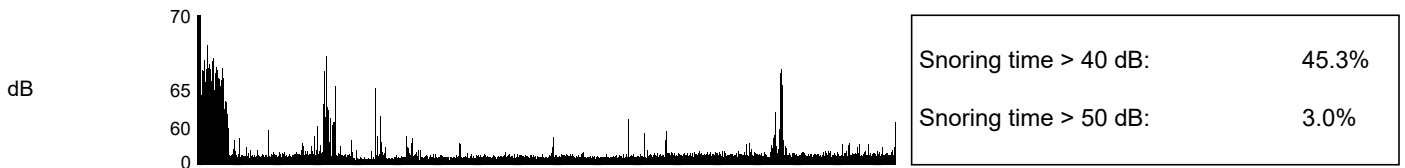
OXYGEN SATURATION (SpO2)



SLEEP STAGE



SNORING



Patient Report Night 2

Patient Name

Date of Night 2 27 Sep 2021

SLEEP APNEA SEVERITY

Overall Apnea Hypopnea Index (3% Desats): average of 0.9 events per hour when asleep



Overall AHI (3% Desats + Arousals): average of 1.8 events per hour when asleep



Positional Severity

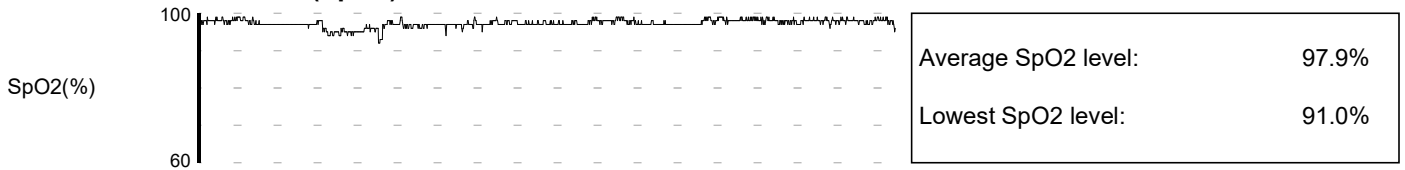
Supine Apnea Hypopnea Index: average of 0.0 events per hour when back-sleeping



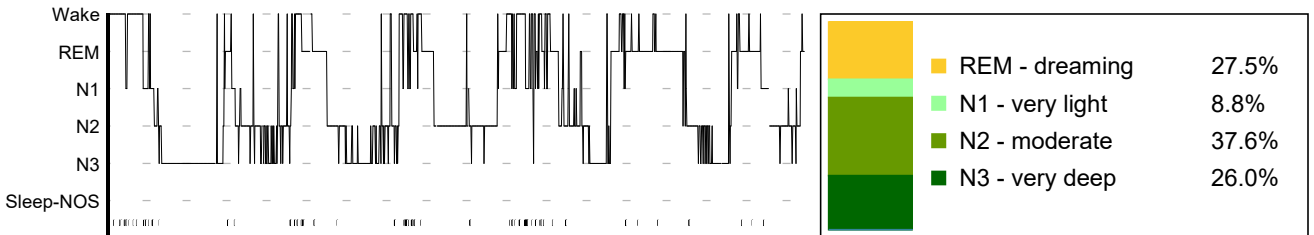
Non-Supine Apnea Hypopnea Index: average of 0.8 events per hour when NOT back-sleeping



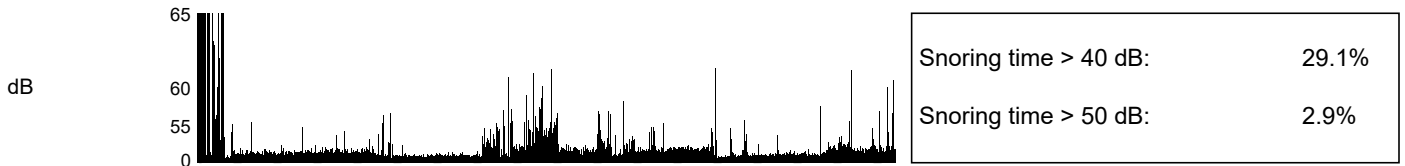
OXYGEN SATURATION (SpO2)



SLEEP STAGE



SNORING



Patient Report Night 3

Patient Name

Date of Night 3

28 Sep 2021

SLEEP APNEA SEVERITY

Overall Apnea Hypopnea Index (3% Desats): average of 2.3 events per hour when asleep



Overall AHI (3% Desats + Arousals): average of 2.7 events per hour when asleep



Positional Severity

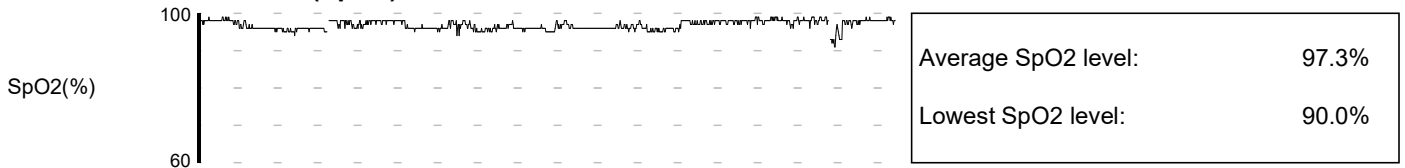
Supine Apnea Hypopnea Index: average of 4.2 events per hour when back-sleeping



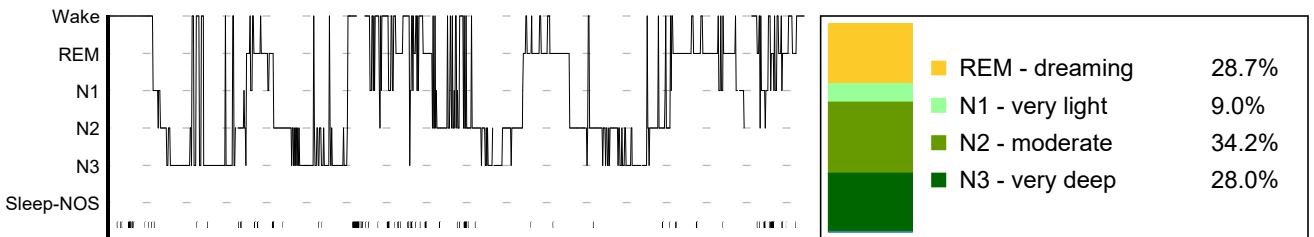
Non-Supine Apnea Hypopnea Index: average of 2.2 events per hour when NOT back-sleeping



OXYGEN SATURATION (SpO2)



SLEEP STAGE



SNORING

