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NEUROSOFT Sleep Systems

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Polysomnography is the Gold Standard for the Diagnosis of Sleep Disorders

Polysonnography is the continuous recording of physiological parameters during sleep to analyze sleep stages and detect sleep-related breathing and movement disorders.

Clinical Practice Guidelines for Polysomnography

1. Berry R. B., Albertio C. L., Harding S. M. et al. for the American Academy of Sleep Medicine. The AASM manual for the Scoring of Sleep and Associated Events: Rules, terminology and technical specifications. Version 2.6. Darien, IL, the American Academy of Sleep Medicine; 2020

2. Littner M. R. et al. Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test // Sleep, 28(1), 113-121.

Indications for PSG*

1. Sleep-related breathing disorders (OSAS, CSAS, etc.)
2. Narcolepsy
3. Parasomnias (sleepwalking, nightmare disorders, etc.)
4. Sleep-related movement disorders (restless legs syndrome, periodic limb movement sleep disorder, etc.)
5. Continuous positive airway pressure (CPAP) titration in patients with sleep-related breathing disorders
6. Sleep related seizure disorder

** Kushida C. A. et al. Practice parameters for the indications for polysomnography and related procedures: an update for 2005 // Sleep, 28(4), 499-523.*

Types of Sleep Studies

1 — Full-Night Routine Polysomnography (PSG)

2 — Sleep Apnea Testing (SAT)

3 — Manually PAP titration during PSG

4 — Split-Night PSG Test

5 — Multiple Sleep Latency Test (MSLT)

6 — Maintenance of Wakefulness Test (MWT)

Full-Night Routine PSG

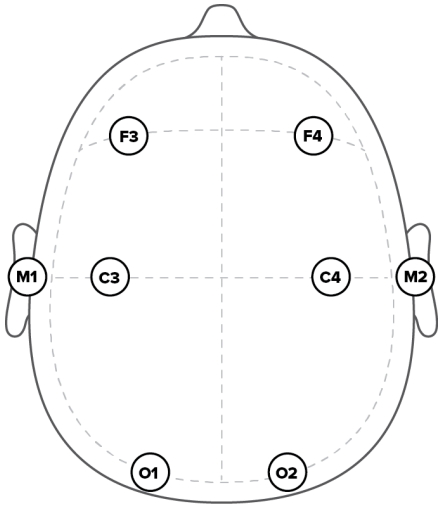
Routine PSG study is intended for:

- **Detection of sleep-wake cycle disturbances**
- Diagnosis of sleep-related breathing disorders
- Diagnosis of sleep-related movement disorders

Routine PSG: Sleep Staging

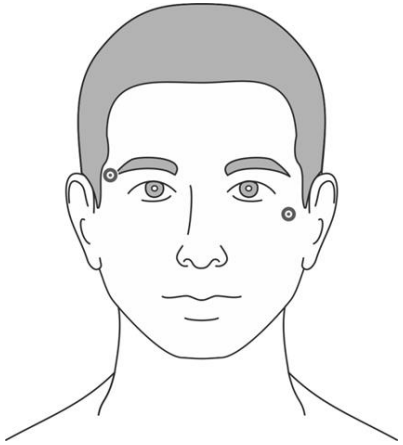
Electroencephalogram (EEG)

- F4M1
- F3M2
- C4M1
- C3M2
- O2M1
- O1M2

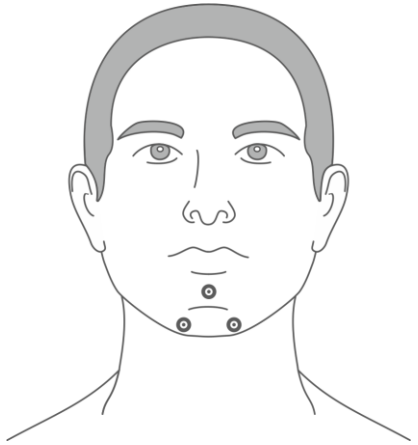


EEG, EOG, EMG electrode

Electrooculogram (EOG)



Electromyogram (Chin EMG)



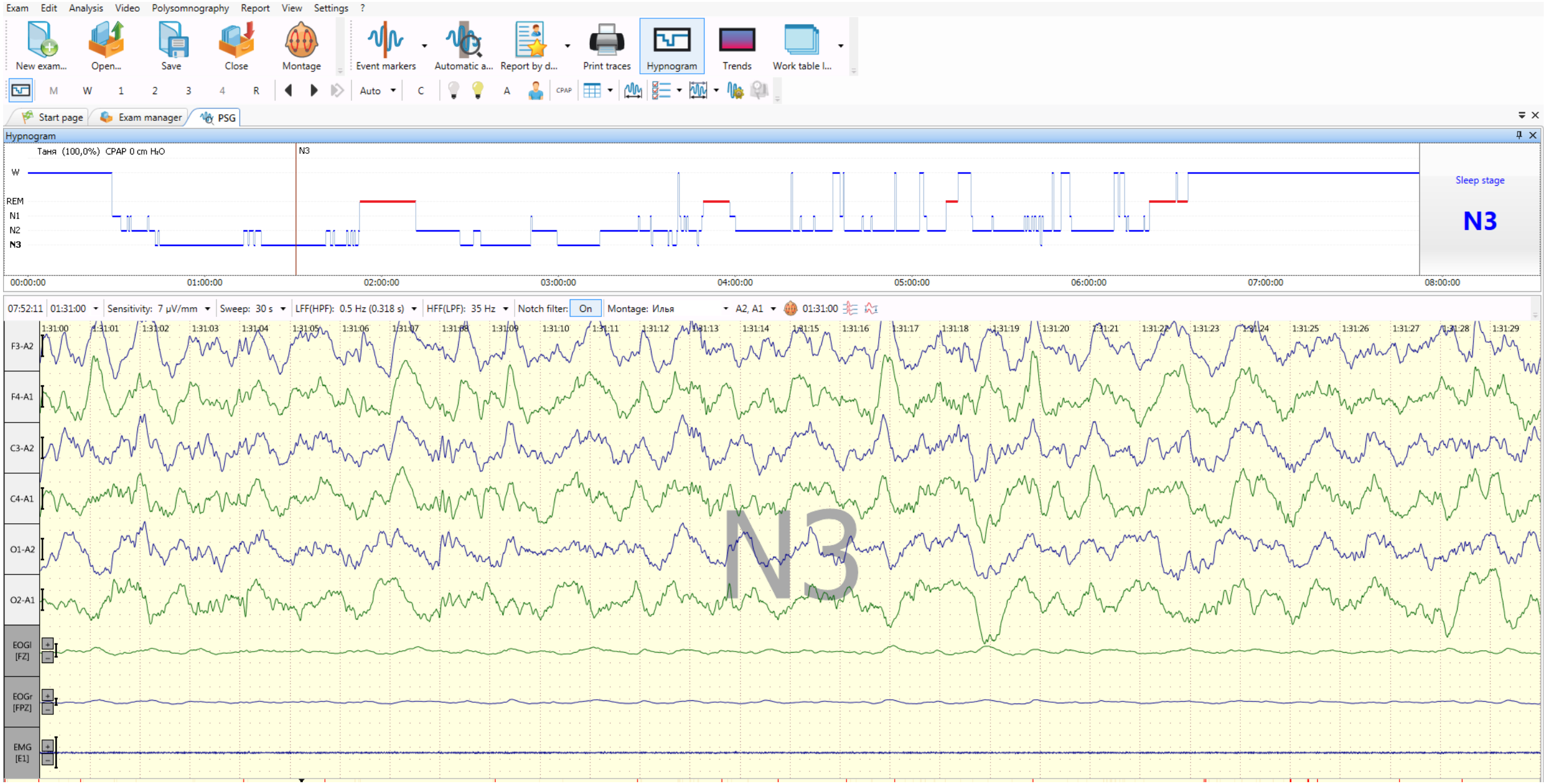
EOG, EMG electrode

Neuron-Spectrum.NET Tools for Sleep Stage Analysis

1. Algorithm for sleep staging in adults in automatic and manual modes
2. Manual sleep staging in children (2 months and older)
3. Automatic construction of hypnograms and trends
4. Calculation of sleep scoring data

Wakefulness Stage in Neuron-Spectrum.NET Software

Stage N3 in Neuron-Spectrum.NET



Sleep Scoring Data

Sleep staging results

Sleep statistics | Sleep stages | Arousals | MSLT | MWT

Sleep statistics

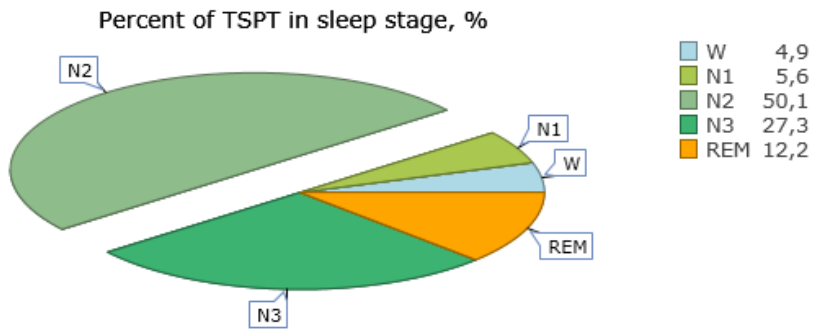
Parameter	
Exam date	04.01.2012
Recording start time	23:57:11
Recording end time	8:02:00
Light off	0:07:41
Light on	8:02:00
Time in bed (TB)	07:45:55
Epoch duration	30 s
Epoch count	944
Complete hypnogram scoring percent	100,0%
Total sleep period time (TSPT)	06:05:00
Start of sleep period	0:38:19
End of sleep period	6:43:19
Total sleep time (TST)	05:47:30
Sleep onset latency	00:17:59
Persistent sleep latency	00:17:59
Awake time after sleep onset	01:36:11
Total wake time during sleep period	00:17:30
Awake time after final arousal	01:18:41
Number of segments during sleep period time	114
Number of segments during sleep	102
First awake latency	03:12:00
Last delta-sleep episode latency	05:15:00
Number of awakenings	12
Number of awakenings with more than 3 minute duration	2
Sleep efficiency index 2 (TST/TB)	74,6 %
Sleep efficiency index 2 (TSPT/TB)	78,3 %
Movement activation index	0,00
Number of arousals	68
Arousal index	11,18
Number of sleep cycles	4
REM sleep latency (from Lights Off)	01:41:59

Sleep staging results

Sleep statistics | Sleep stages | Arousals | MSLT | MWT

Sleep stage statistics

Parameter	Wake	N1	N2	N3	REM	NREM (N1+N2+N3)
Latency period	00:17:29	00:17:59	00:20:59	00:32:29	01:41:59	00:17:59
Stage duration	00:18:00	00:20:30	03:03:00	01:39:30	00:44:30	05:03:00
Percent of TSPT in sleep stage	4,9 %	5,6 %	50,1 %	27,3 %	12,2 %	83,0 %
Percent of TST in sleep stage	-	5,9 %	52,7 %	28,6 %	12,8 %	87,2 %
Number of stage segments	13	31	47	18	5	14
Average segment duration	00:01:23	00:00:40	00:03:54	00:05:32	00:08:54	00:21:39
Maximum segment duration	00:04:30	00:03:00	00:19:00	00:28:30	00:19:00	01:29:00
Latency of maximum segment	05:04:59	00:17:59	03:49:29	00:33:59	01:41:59	02:00:59
Percent of maximum segments	25,0 %	14,6 %	10,4 %	28,6 %	42,7 %	29,4 %
Number of minimum segments	7	27	12	7	0	1



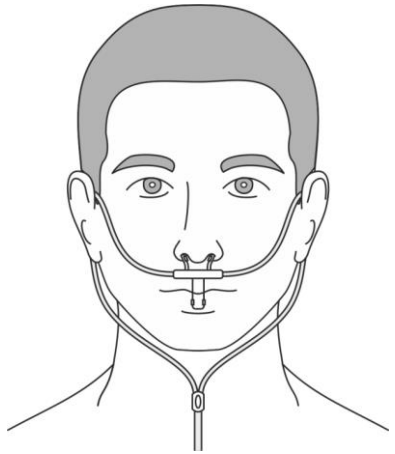
Full-Night Polysomnography

Routine PSG test is intended for:

- Detection of sleep-wake cycle disturbances
- **Diagnosis of sleep-related breathing disorders**
- Diagnosis of sleep-related movement disorders

Routine PSG: Sensors to Monitor Breathing during Sleep

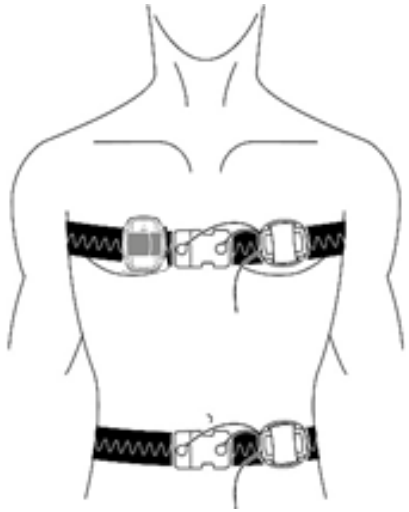
1. Oronasal flow



Thermistor airflow sensor

Nasal cannula

2. Thoracic and abdominal efforts and body position

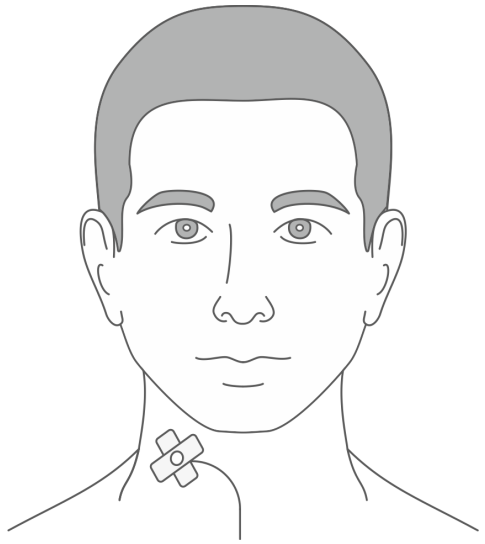


RIP belt*

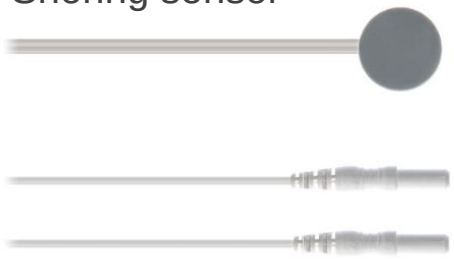
Body position sensor

Routine PSG: Sensors to Monitor Breathing during Sleep

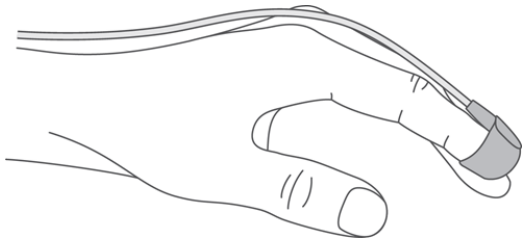
3. Snore



Snoring sensor

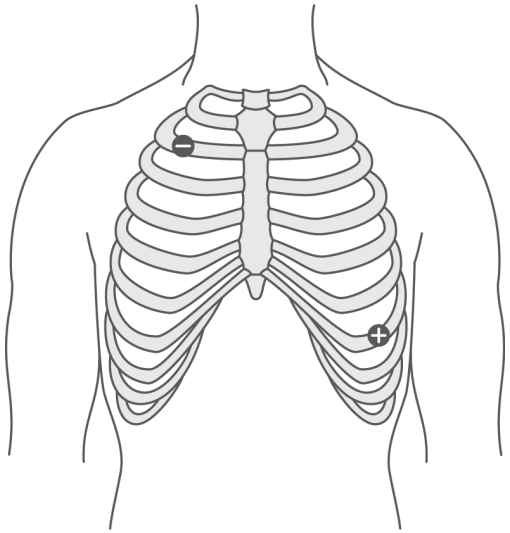


4. Oximetry



Disposable or reusable SpO_2 sensor*

5. ECG



ECG electrodes

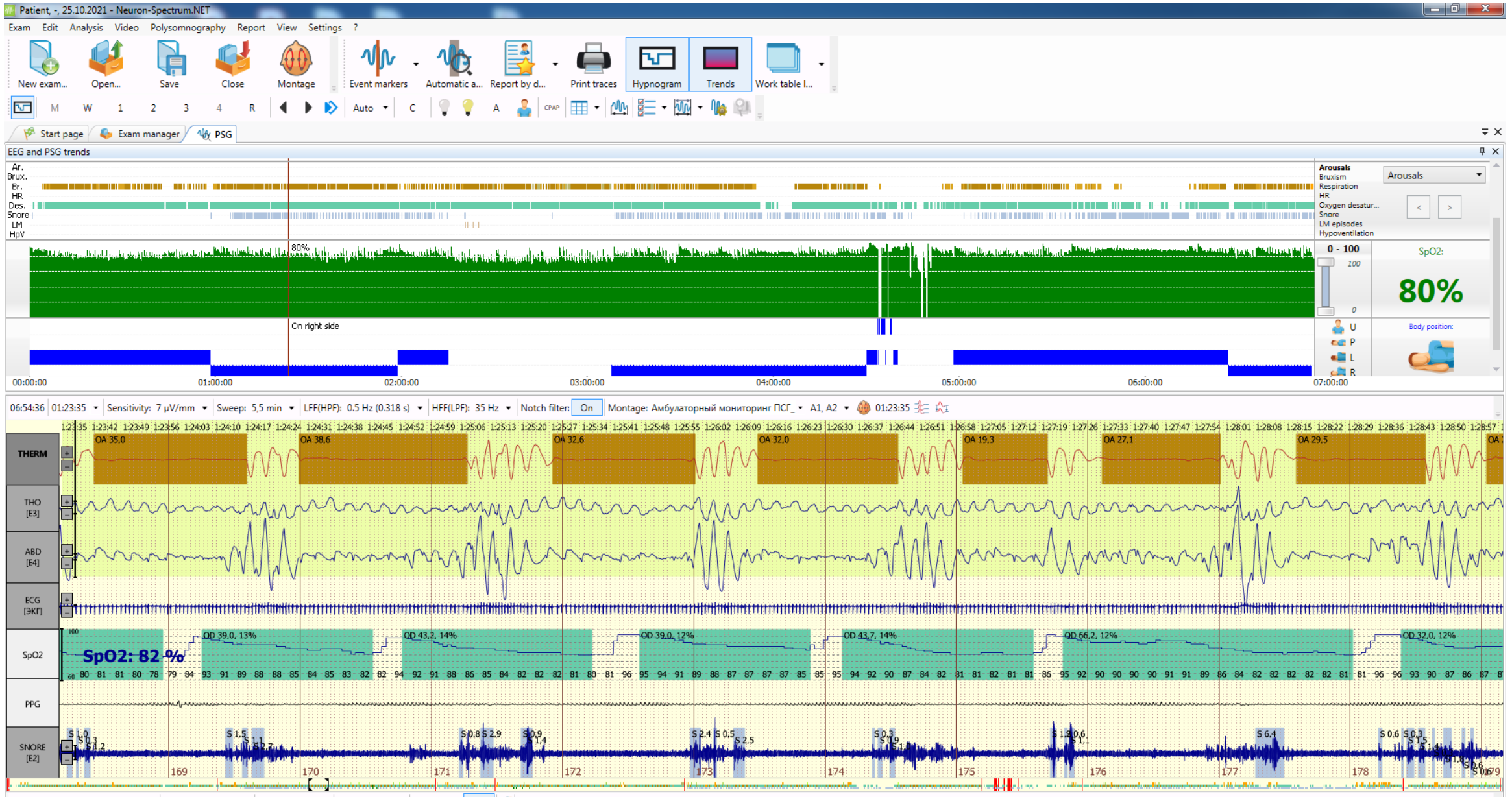
Neuron-Spectrum.NET Tools for Respiratory Monitoring

1. Automatic detection and analysis of:
- respiratory events (apnea and hypopnea);
- desaturation;
- snore;
- cardiac events (tachycardia, bradycardia, asystole);
- autonomic arousals (by pulsogram or ECG channel).

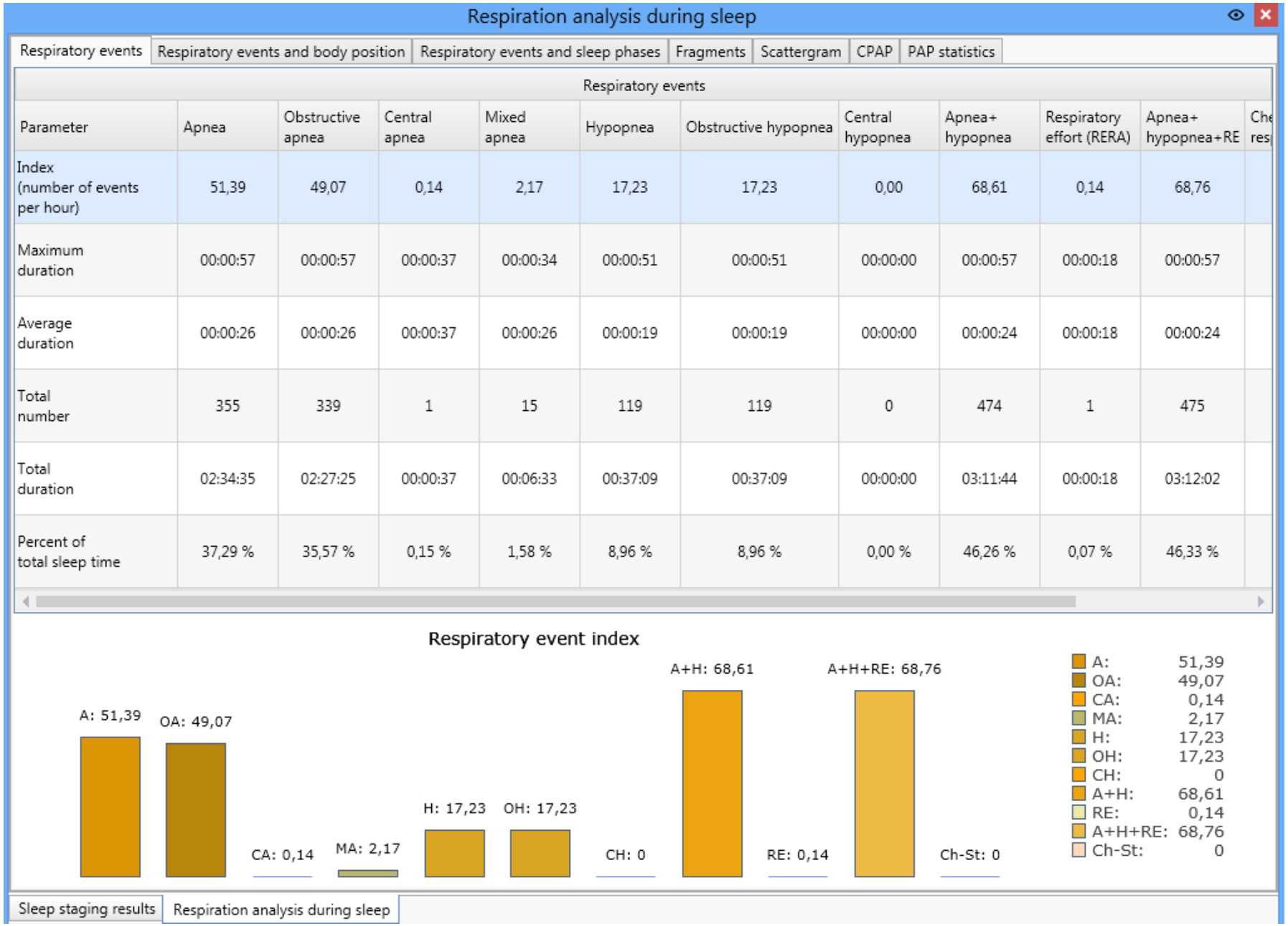
2. Automatic construction of trends (PSG episodes, SpO2, respiratory rate, body position, etc.)

3. Calculation of quantitative data (AHI, SpO2 parameters, etc.)

Routine PSG: Sleep Apnea Testing



Analysis of Respiratory Events



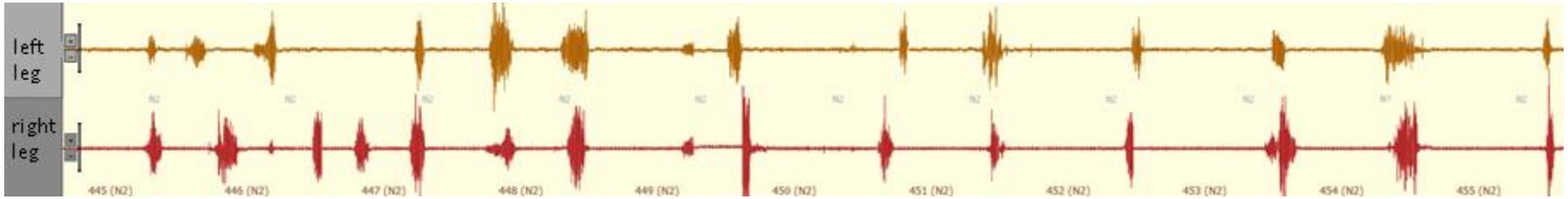
Full-Night Polysomnography (PSG)

Routine PSG test is intended for:

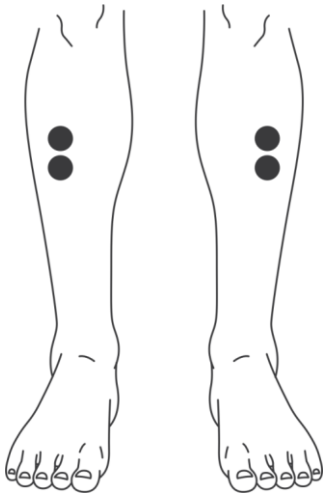
- Detection of sleep-wake cycle disturbances
- Diagnosis of sleep-related breathing disorders
- **Diagnosis of sleep-related movement disorders**

Routine PSG: Analysis of Limb Movement Events

Automatic detection of events of limb movements in Neuron-Spectrum.NET.

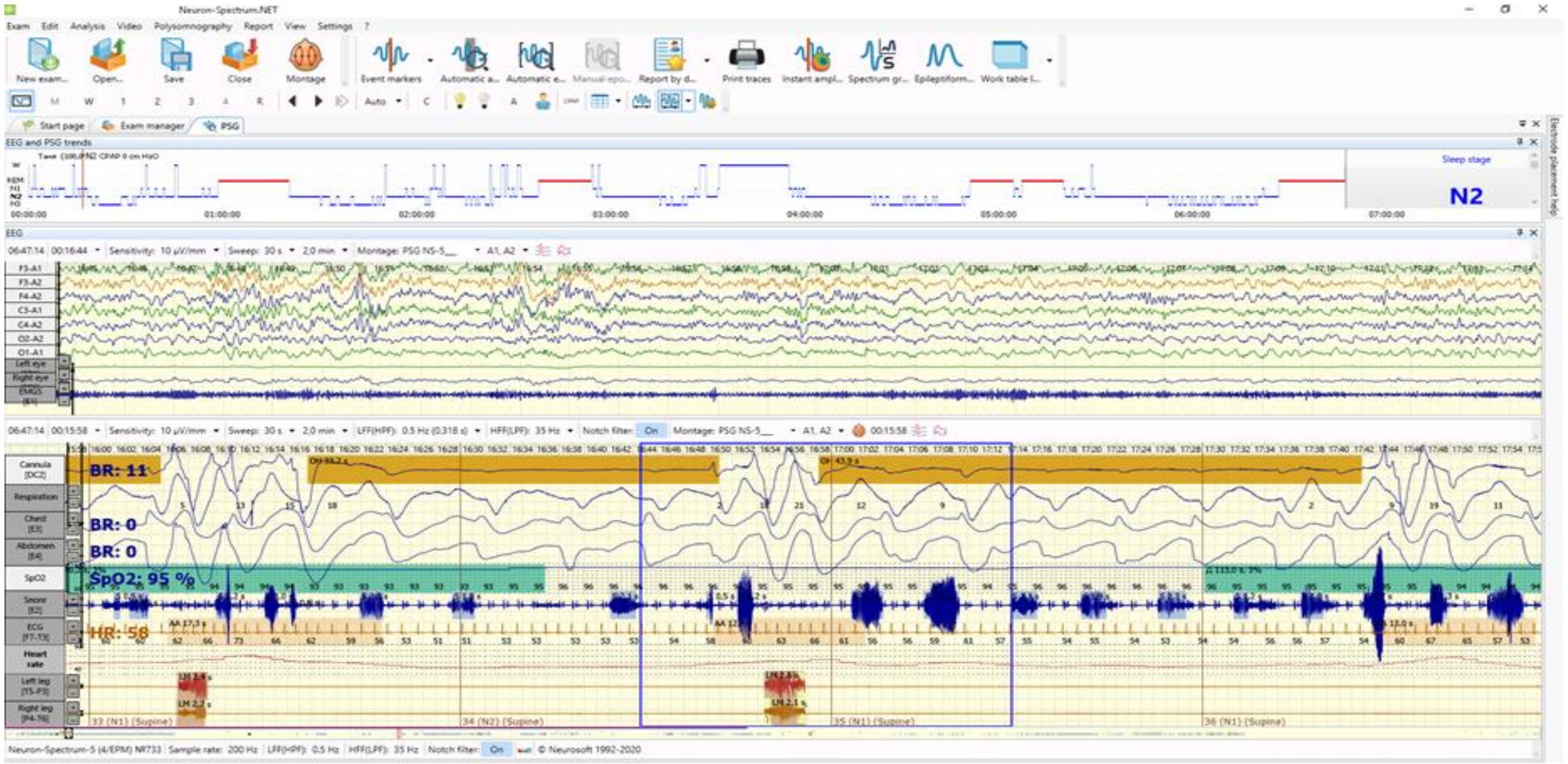


Two EMG channels (left and right leg)



EMG electrodes

Routine PSG Study



PSG Report

Neurosoft
Medical diagnostic equipment

Patient information

Name: Patient	Sex: Unknown	Age: 41	Birthdate: 12.05.1980
Height: 168	Weight: 112	BMI: 39.7	ID:

Monitoring information

Report No.: 1	Data of test: 25.11.2021

PSG report

Description: The sleep study was obtained in compliance with AASM standards: 6EEG channels, 2 EOG channels, one ECG channel, chin EMG, left and right leg EMG, a snore sensor taped to the neck, an oronasal thermal sensor and a nasal pressure transducer, respiratory inductance plethysmography, a pulse oximeter with 3 second averaging time and a body position sensor.

Sleep data

Lights out: 23:04:54	Lights on: 6:28:54	Total sleep time (TST): 06:13:30	Exam duration: 14:00:06
Total recording time (TRT): 07:24:00	Sleep efficiency (TST/TRT): 84,1 %	Wake after sleep onset: 01:02:45	Number of Awakenings: 202
Sleep Latency: 00:07:46	R Latency: 01:35:16		

Sleep stages

Sleep stages	W	R	N1	N2	N3
Duration (min)	01:10:30	01:18:00	01:58:30	02:02:30	00:54:30
% total sleep time		20,9	31,7	32,8	14,6

Respiratory Events

	Obstructive Apnea	Mixed Apnea	Central Apnea	Hypopnea	Apnea +Hypopnea	Respiratory effort related arousal (RERA)
Number	43	0	3	46	**116**	112
Index	6,91	0	0,48	7,39	**18,6**	18
Average duration (s)	00:00:20	0	00:00:16	00:00:20	00:00:18	
The longest duration(s)	00:00:47	00:00:00	00:00:17	00:00:47	00:00:54	

Respiratory events and sleep stages

Respiratory events	REM	NREM	Total sleep
Number of Obstructive Apneas (index)	25 (19,23)	17 (3,45)	43 (6,91)
Number of Mixed Apneas (index)	0 (0,00)	0 (0,00)	0 (0)
Number of Central Apneas (index)	0 (0,00)	2 (0,41)	3 (0,48)
Number of Hypopneas (index)	18 (13,85)	96 (19,49)	116 (18,6)
Number of Apneas and Hypopneas (AHI)	43 (33,08)	115 (23,35)	162 (26)
Number of Respiratory disorder events (RDI)	43 (7,23)	115 (18,5)	**162 (26)**

Respiratory events and Body Positions

Respiratory events	Supine	Left	Right	Prone	Upright
Number of Obstructive Apneas (index)	18 (8,31)	14 (6,00)	11 (6,38)	0 (0,00)	0 (8,31)
Number of Mixed Apneas (index)	0 (0,00)	0 (0,00)	0 (0,00)	0 (0,00)	0 (0,00)
Number of Central Apneas (index)	3 (1,38)	0 (0,00)	0 (0,00)	0 (0,00)	0 (0,00)
Number of Hypopneas (index)	79 (36,46)	25 (10,71)	12 (6,96)	0 (0,00)	0 (0,00)
Number of Apneas and Hypopneas (AHI)	100 (46,15)	39 (16,71)	23 (13,33)	0 (0,00)	0 (0,00)
RDI	46,15	16,71	13,33	0,00	0,00

Arterial Oxygen Saturation Statistics

Average Oxygen Saturation during Wake %	97	NREM average oxygen saturation %	97	REM average oxygen saturation %	97	Sleep average oxygen saturation %	97
Lowest oxygen saturation during Sleep,%	58	NREM minimum oxygen saturation %	81	REM minimum oxygen saturation %	58		
02 Desaturation ≥3% index		11,2		Number of 02 Desaturation ≥3%		81	
<90% time	00:07:40	<85% time	00:03:38	<80% time	00:01:50	<75% time	00:00:02

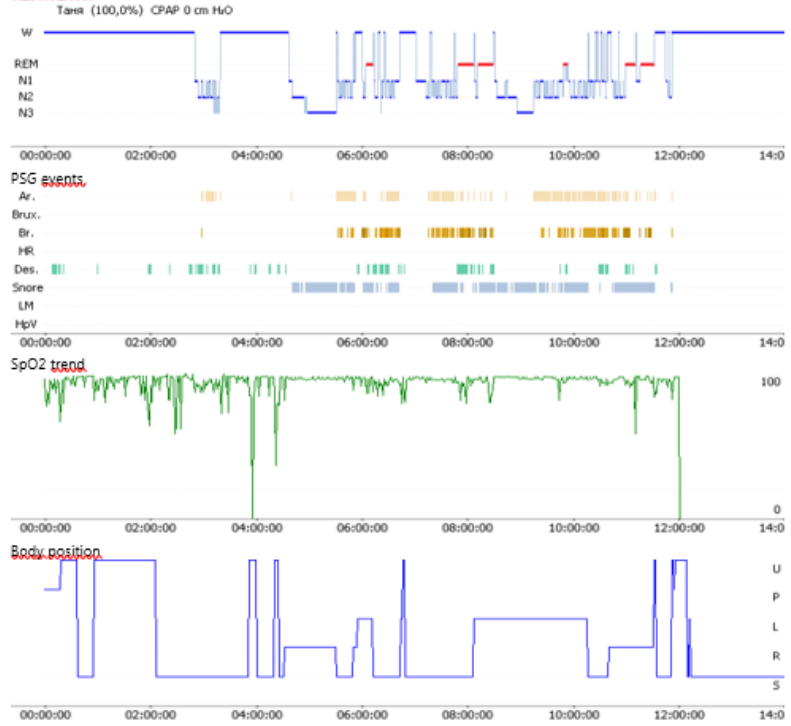
Arousal Statistics

	REM sleep		NREM sleep		Sleep	
	Number	index	Number	index	Number	index
Arousal	16	2,57	186	29,9	202	32,4
Respiratory event with Arousals	11	1,77	101	16,2	112	18
Limb movement with Arousals	0	0	0	0	0	0
Periodic leg movement with Arousals	0	0	0	0	0	0
Spontaneous arousals	5	0,8	85	13,6	90	14,5

Cardiac Events

Average HR: 73 bpm	Lowest HR: 33	Highest HR: 108	
Bradycardia 25	Asystole: 1	Tachycardia: 44	Atrial fibrillation:
Narrow complex tachycardia:	Wide complex tachycardia:	Other arrhythmias:	

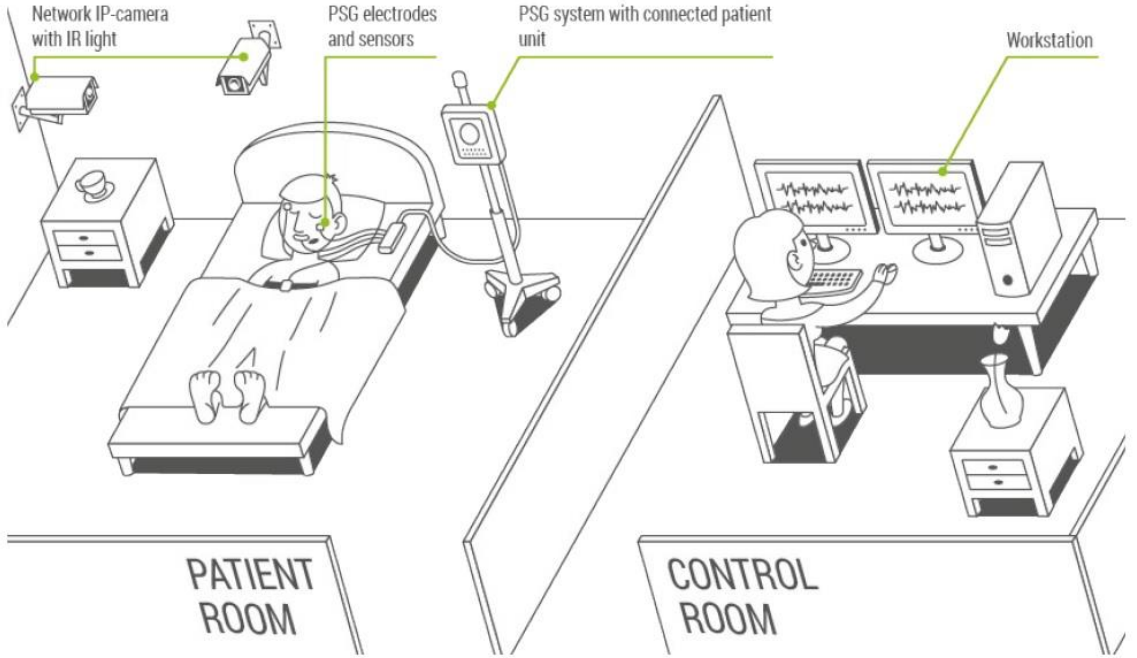
Hypnogram



Conclusion

Application of Routine PSG

Attended polysomnography in a sleep center (In-Lab PSG)



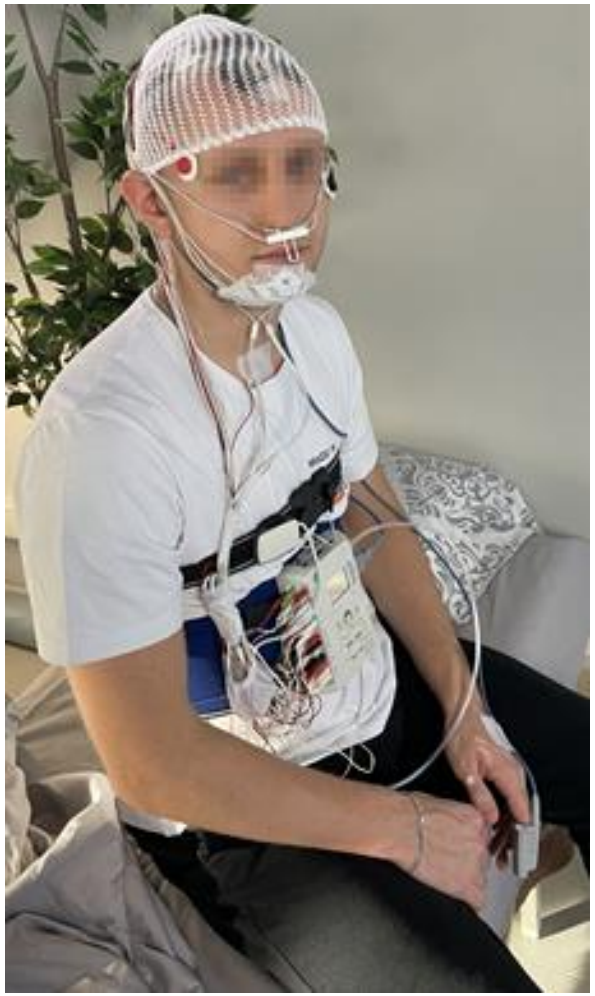
Dahua PTZ IP 4x zoom dome camera for studies in sleep centers

Application of Routine PSG

Out-of-Center Sleep Testing
with or without video

IP-camera
for ambulatory PSG studies

PSG Study with Neuron-Spectrum-AM/PSG (Type II PSG Testing)



Types of Sleep Studies

1 — Full-Night Routine Polysomnography (PSG)

2 — **Sleep Apnea Testing (SAT)**

3 — Manually PAP titration during PSG

4 — Split-Night PSG Test

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Sleep Apnea Testing (SAT)

Method to Detect ONLY Apnea and Hypopnea Events

The Pros of Sleep Apnea Testing:

- Continuous monitoring by medical staff is not required
- Financial costs of HSAT are lower than for routine PSG
- More comfortable for patients (the study is carried out at home, fewer sensors are placed on the patient's body)
- Conduction of study and interpretation of its results is easier than routine PSG

AHI= Number of apnea and hypopnea events/ Total sleep time

Sleep Apnea Testing (SAT)

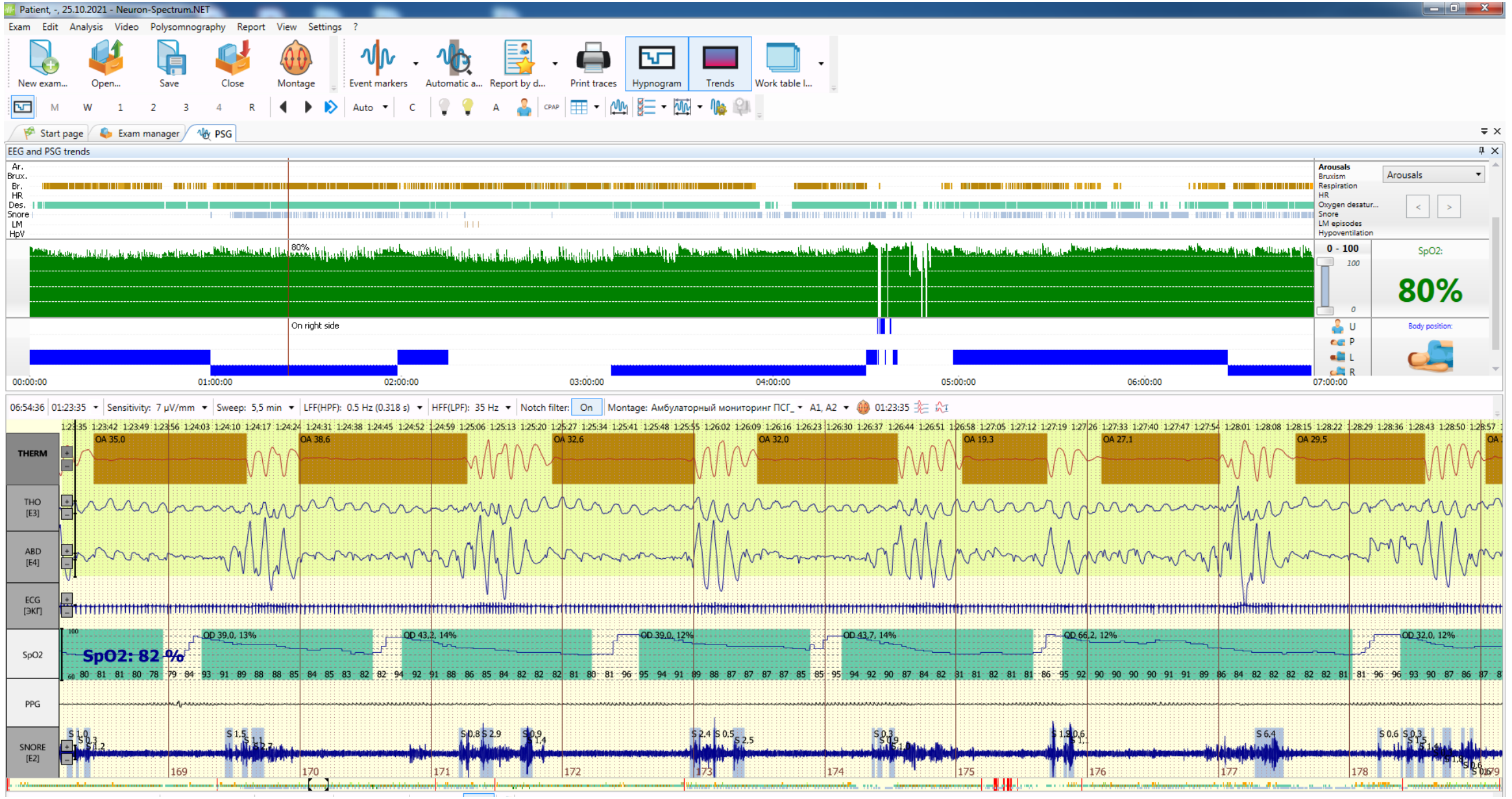
Method to Detect ONLY Apnea and Hypopnea Events

The Cons of SAT:

- No data about patient's sleep quality
- Sleep-related breathing disorders can be significantly underestimated if obstructive sleep apnea and insomnia occur in the same patient

SAT is recommended to confirm OSA in patients with a high pretest probability for moderate to severe OSA.

Sleep Apnea Testing



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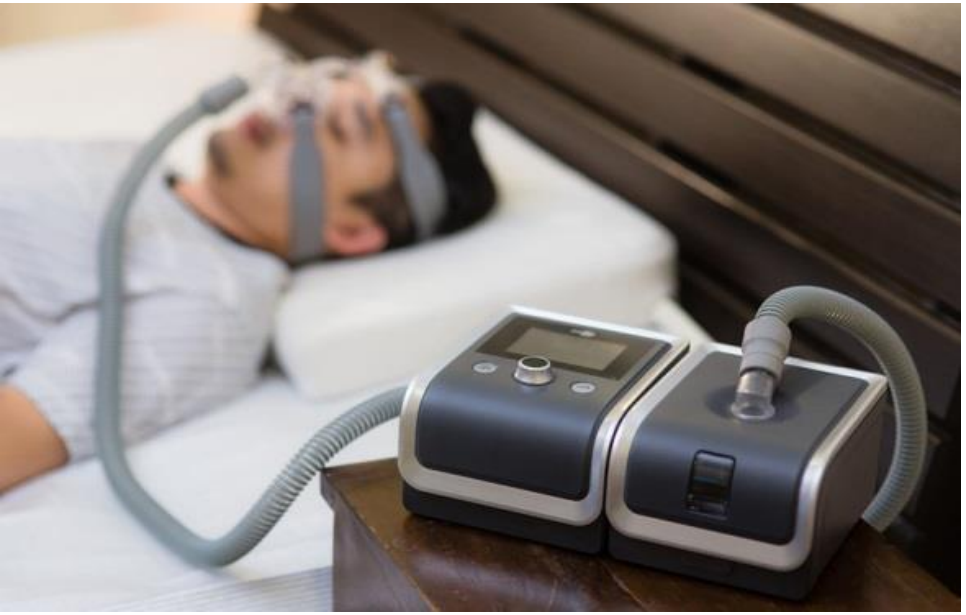
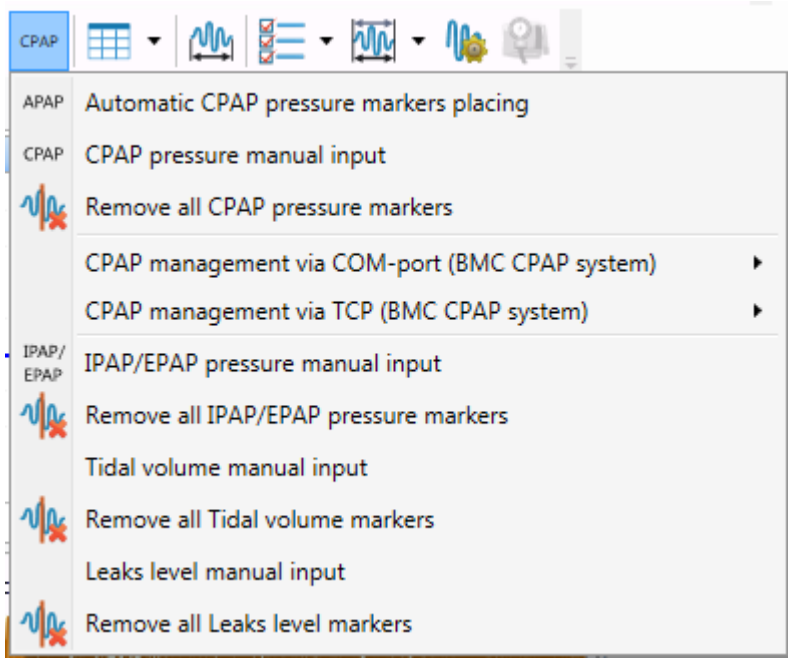
PAP is Effective and Safe Therapy for Moderate to Severe OSA

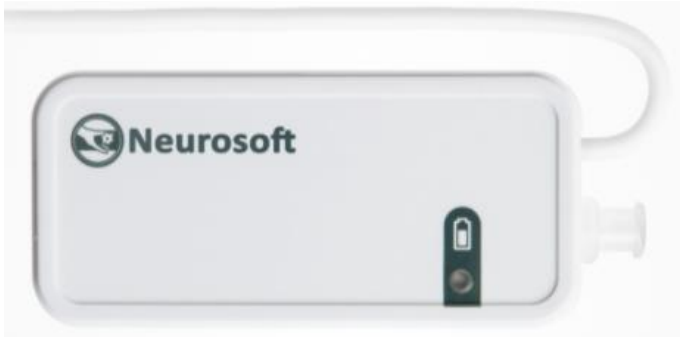


During the PAP therapy the airflow is sent through a face mask to a patient's upper airway in order to prevent it from closing in due to the episodes of obstructive apnea.

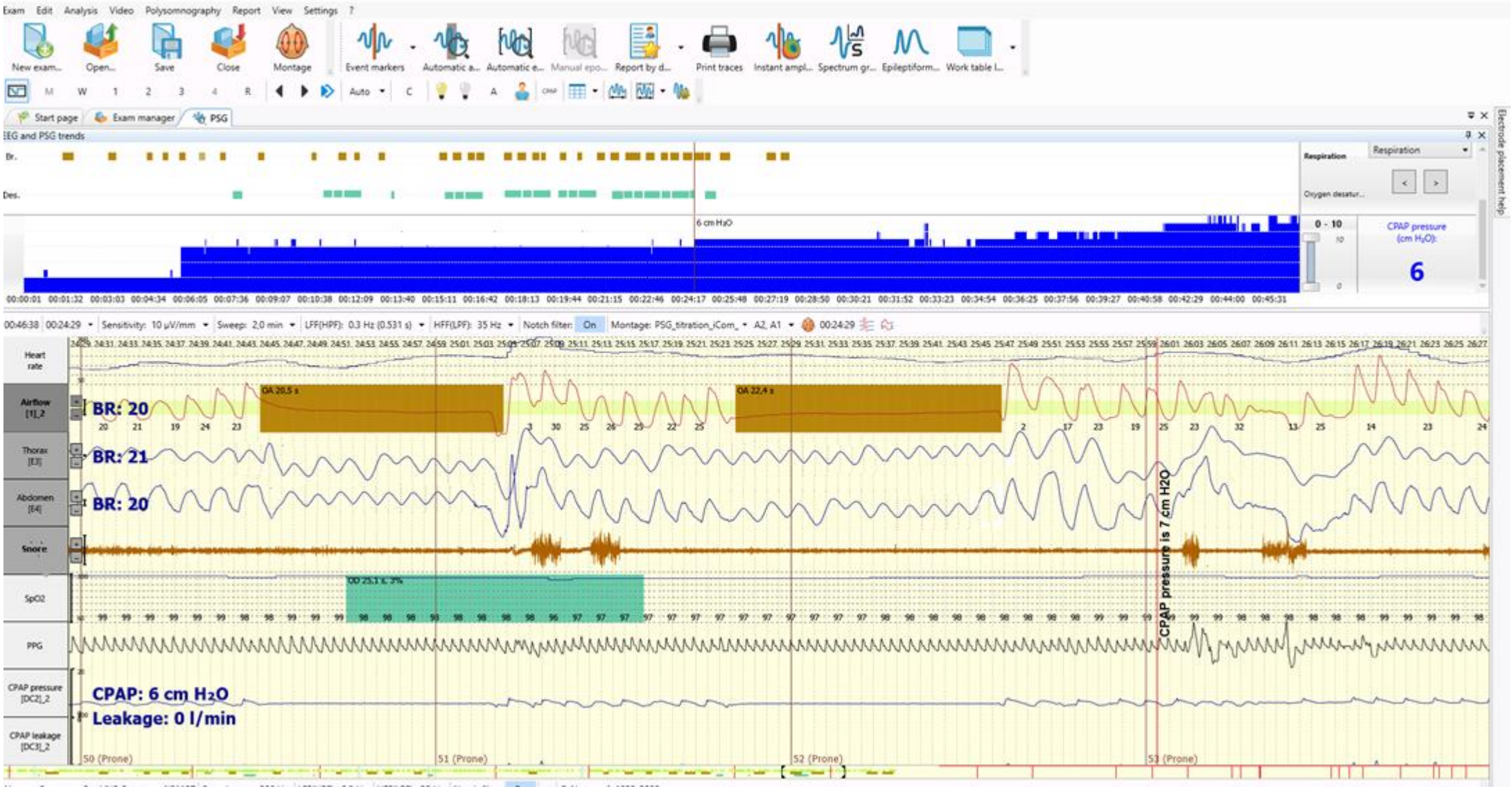
Determination of Therapeutic PAP with Neurosoft PSG Recorders and Systems



1. Manual input of PAP pressure markers
2. Pressure measurement during PAP titration
3. Additional PSG module to transfer PAP titration data
4. Control of PAP devices and automatic import of titration parameters (only for BMC CPAP system)

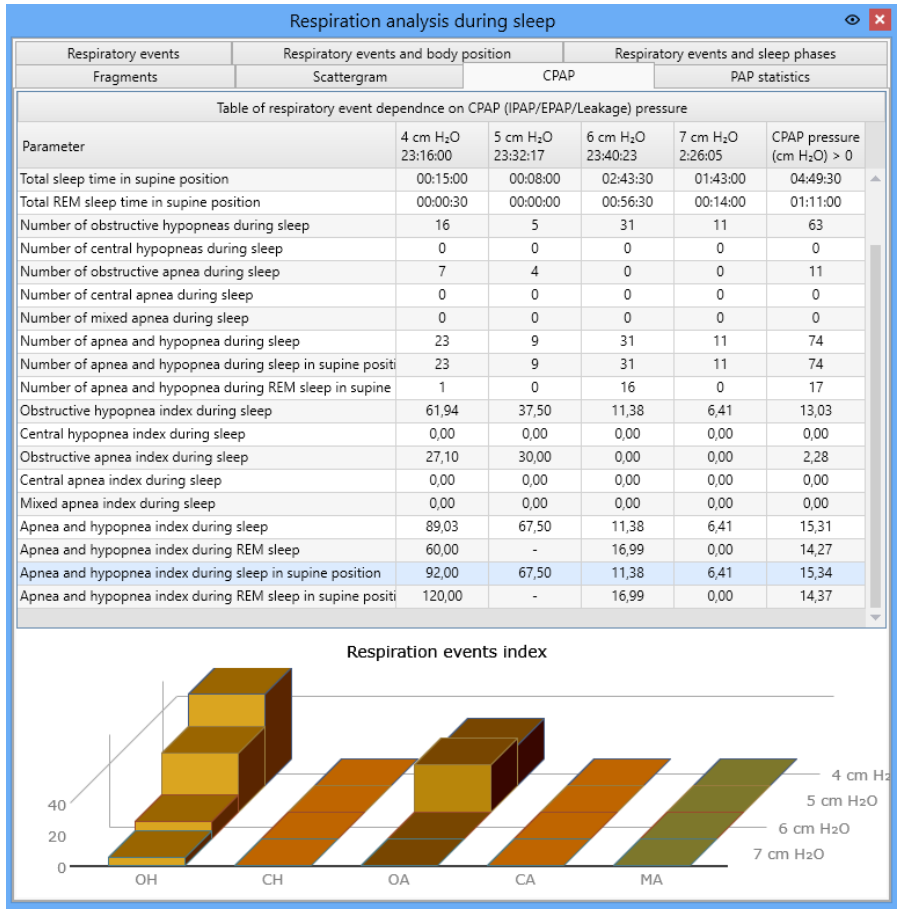


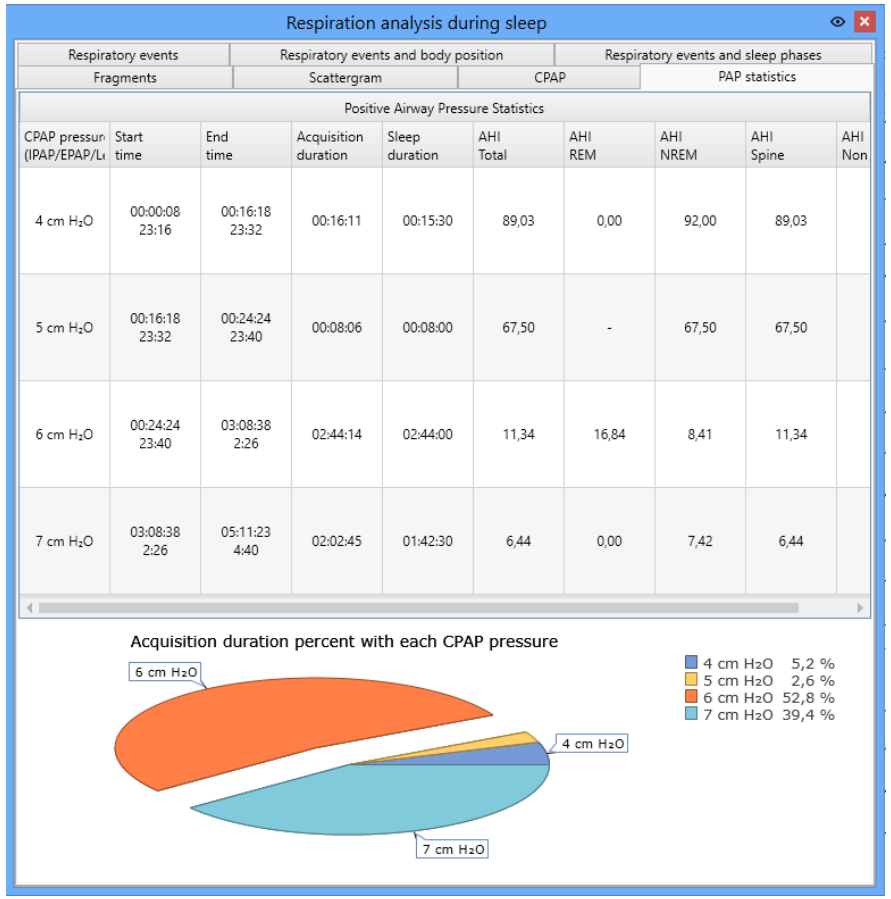
PAP Titration in Neuron-Spectrum.NET



PAP Titration in Neuron-Spectrum.NET

1. Automatic and manual PAP titration to identify effective pressure before continuous PAP treatment
2. Calculation of indices (including AHI) depending on the therapeutic pressure level
3. Construction of pressure trends





Types of Sleep Studies

1 — Full-Night Routine Polysomnography (PSG)

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4 — **Split-Night PSG Test**

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Split-Night PSG Test

When conducting a split-night PSG test, routine polysomnography is performed for the first hours. In case the apnea-hypopnea index (AHI) is higher than normal, the titration is performed to determine the optimal PAP pressure.

Split-Night PSG = Routine PSG + PAP Titration

The Prons:

- The test is cheaper than the routine PSG and PAP titration under PSG control
- Just one test instead of two studies

The Cons:

- Not always time to select the minimum therapeutic pressure

Split-Night PSG
in Neuron-Spectrum.Net Software

Respiration analysis during sleep

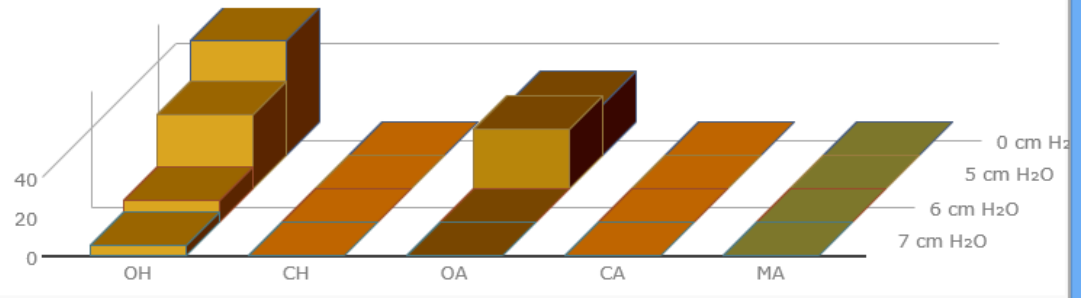
Respiratory events | Respiratory events and body position | Respiratory events and sleep phases

Fragments | Scattergram | CPAP | PAP statistics

Table of respiratory event dependnce on CPAP (IPAP/EPAP/Leakage) pressure

Parameter	0 cm H_2O 23:15:53	5 cm H_2O 23:32:17	6 cm H_2O 23:40:23	7 cm H_2O 2:26:05	CPAP pressure (cm H_2O) > 0
Total sleep time in supine position	00:15:00	00:08:00	02:43:30	01:43:00	04:34:30
Total REM sleep time in supine position	00:00:30	00:00:00	00:56:30	00:14:00	01:10:30
Number of obstructive hypopneas during sleep	16	5	31	11	47
Number of central hypopneas during sleep	0	0	0	0	0
Number of obstructive apnea during sleep	7	4	0	0	4
Number of central apnea during sleep	0	0	0	0	0
Number of mixed apnea during sleep	0	0	0	0	0
Number of apnea and hypopnea during sleep	23	9	31	11	51
Number of apnea and hypopnea during sleep in supine positi	23	9	31	11	51
Number of apnea and hypopnea during REM sleep in supine	1	0	16	0	16
Obstructive hypopnea index during sleep	61,94	37,50	11,38	6,41	10,27
Central hypopnea index during sleep	0,00	0,00	0,00	0,00	0,00
Obstructive apnea index during sleep	27,10	30,00	0,00	0,00	0,87
Central apnea index during sleep	0,00	0,00	0,00	0,00	0,00
Mixed apnea index during sleep	0,00	0,00	0,00	0,00	0,00
Apnea and hypopnea index during sleep	89,03	67,50	11,38	6,41	11,15
Apnea and hypopnea index during REM sleep	60,00	-	16,99	0,00	13,62
Apnea and hypopnea index during sleep in supine position	92,00	67,50	11,38	6,41	11,15
Apnea and hypopnea index during REM sleep in supine positi	120,00	-	16,99	0,00	13,62

Respiration events index



Sleep staging results

Sleep statistics | Sleep stages | Arousals | MSLT | MWT

Sleep statistics

Parameter	For the entire period	Diagnostic part	Therapeutic part
Exam date	13.09.2019		
Recording start time	23:15:53		
Recording end time	4:40:12		
Light off	23:15:53		
Light on	4:39:05		
Time in bed (TB)	05:10:16	00:16:18	04:53:58
Epoch duration	30 s	30 s	30 s
Epoch count	622	32	590
Complete hypnogram scoring percent	99,8%		
Total sleep period time (TSPT)	05:00:30	00:15:18	04:45:12
Start of sleep period	23:16:55		
End of sleep period	4:30:08		
Total sleep time (TST)	04:49:30	00:14:30	04:35:00
Sleep onset latency	00:01:00		
Persistent sleep latency	00:06:30		
Awake time after sleep onset	00:19:16	00:00:18	00:18:58
Total wake time during sleep period	00:10:30	00:00:18	00:10:12
Awake time after final arousal	00:08:46		
Number of segments during sleep period time	72	16	56
Number of segments during sleep	66	15	51
First awake latency	00:05:00		
Last delta-sleep episode latency	04:30:00		
Number of awakenings	6	1	5
Number of awakenings with more than 3 minute duration	1	0	1
Sleep efficiency index 2 (TST/TB)	93,3 %	88,9 %	93,5 %
Sleep efficiency index 2 (TSPT/TB)	96,8 %	93,8 %	97,0 %
Movement activation index	0,00	0,00	0,00
Number of arousals	Sleep staging is not fi	0	33
Arousal index	Sleep staging is not fi		6,58
Sleep quality index	46,20		
Relative sleep quality index	9,58		
Number of sleep cycles	2	0	2
REM sleep latency (from Lights Off)	00:00:00		

Types of Sleep Studies

1 — Full-Night Routine Polysomnography (PSG)

2 — Sleep Apnea Testing (SAT)

3 — Manually PAP titration during PSG

4 — Split-Night PSG Test

5 — Multiple Sleep Latency Test (MSLT): Diagnosis of Excessive Daytime Sleepiness

6 — Maintenance of Wakefulness Test (MWT)

Multiple Sleep Latency Test (MSLT) is a validated objective measure of the ability or tendency to fall asleep*

The MSLT is indicated as part of the evaluation of patients with suspected narcolepsy and may be useful in the evaluation of patients with suspected idiopathic hypersomnia.*

Recommendations for the MSLT Protocol

The test is performed immediately following polysomnography recorded during the patient's major sleep period.

1. The test consists of 4-6 nap opportunities given two hours apart. The sleep room should be dark and quiet during testing. In each nap opportunity, the patient is told to try fall asleep for 20 minutes. With each nap opportunity the subject should be instructed as follows: "Please lie quietly, assume a comfortable position, keep your eyes closed and try to fall asleep." A nap session is terminated after 20 minutes if sleep does not occur.

2. Sleep latency is used as a diagnostic criterion for hypersomnia and narcolepsy.

** Littner, M. R., Kushida, C., Wise, M., G. Davila, D., Morgenthaler, T., Lee-Chiong, T., ... & Kramer, M. (2005). Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test. Sleep, 28(1), 113-121.*

MSLT in Neuron-Spectrum.NET Software

Types of Sleep Studies

1 — Night Polysomnography (Routine PSG)

2 — Sleep Apnea Testing (SAT)

3 — Manually PAP titration during PSG

4 — Split-Night PSG Test

5 —Multiple Sleep Latency Test (MSLT)

6 — Maintenance of Wakefulness Test (MWT)

Maintenance of Wakefulness Test (MWT)

The **MWT** may **be indicated** in assessment of individuals in whom the inability to remain awake constitutes a safety issue (e.g., drivers), or in patients with narcolepsy or idiopathic hypersomnia to assess response to treatment with medications.

Recommendations for the MWT protocol

The MWT consists of four 40-min trials performed at two hour intervals, with the first trial beginning about 1.5 to 3 hours after the patient's usual wake-up time*.

Instructions to the patient consist of the following: "Please sit still and remain awake for as long as possible. Look directly ahead of you, and do not look directly at the light." Patients are not allowed to use extraordinary measures to stay awake such as slapping the face or singing*.

Mean sleep latency < 8.0 minutes on the 40-min MWT is considered abnormal*.

** Littner, M. R., Kushida, C., Wise, M., G. Davila, D., Morgenthaler, T., Lee-Chiong, T., ... & Kramer, M. (2005). Practice parameters for clinical use of the multiple sleep latency test and the maintenance of wakefulness test. Sleep, 28(1), 113-121.*

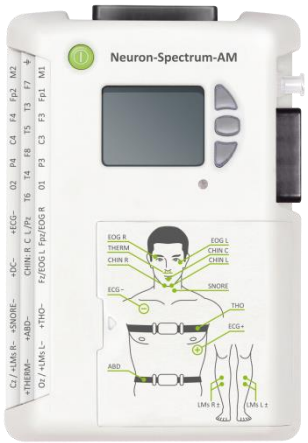
MWT in Neuron-Spectrum.NET Software

AASM Classification of Sleep Study

Name	Sleep stages	SAT	LM/ PLM	Video	Types of PSG Test
Attended polysomnography (In-Lab Testing) Type I	**Yes**	**Yes**	**Yes**	**Yes**	Routine PSG Respiratory monitoring In-lab PAP titration Split-night PSG testing MSLT/MWT
Portable polysomnography (Out-of-Center Sleep Testing) Type II	**Yes**	**Yes**	**Yes**	Yes/No	Routine PSG Sleep Apnea Testing
Sleep Apnea Testing (SAT) with assessment of respiratory effort Type III	No	**Yes**	No	No	Sleep Apnea Testing
Respiratory polygraphy without assessment of respiratory effort or pulse oximetry	No	SpO_2 + airflow	No	No	Respiratory polygraphy without assessment of respiratory effort

Neurosoft PSG Systems (Type I)

Name	Sleep stages	HSAT/LM/ PLM	Video	Neurosoft PSG systems	Types of sleep studies
Attended polysomnography (In-Lab Testing) Type I	Yes	Yes	Yes	Neuron-Spectrum-4P Neuron-Spectrum-5 Neuron-Spectrum-63 Neuron-Spectrum-64 **Neuron-Spectrum-AM** **Neuron-Spectrum-65**	Routine PSG Respiratory monitoring PAP titration Split night PSG testing MSLT/MWT



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Attended Polysomnography (Type I Sleep Monitor)

Neuron-Spectrum-65/PSG

1. **Full range of PSG channels in compliance with the AASM recommendations**
2. Additional DC channel inputs to connect third-party equipment (PSG sensors and units, PSG module to transfer PAP titration data, etc.)
3. Synchronous video monitoring (up to 3 cameras)
4. Connection to a portable patient unit

Attended Polysomnography (Type I Sleep Monitor)

Types of Sleep Studies:

1) Routine PSG

2) PAP Titration under PSG Control

3) Split-Night PSG Test

4) Multiple Sleep Latency Test (MSLT)

5) Maintenance of Wakefulness Test (MWT)

6) Sleep apnea testing (in a clinical setting)

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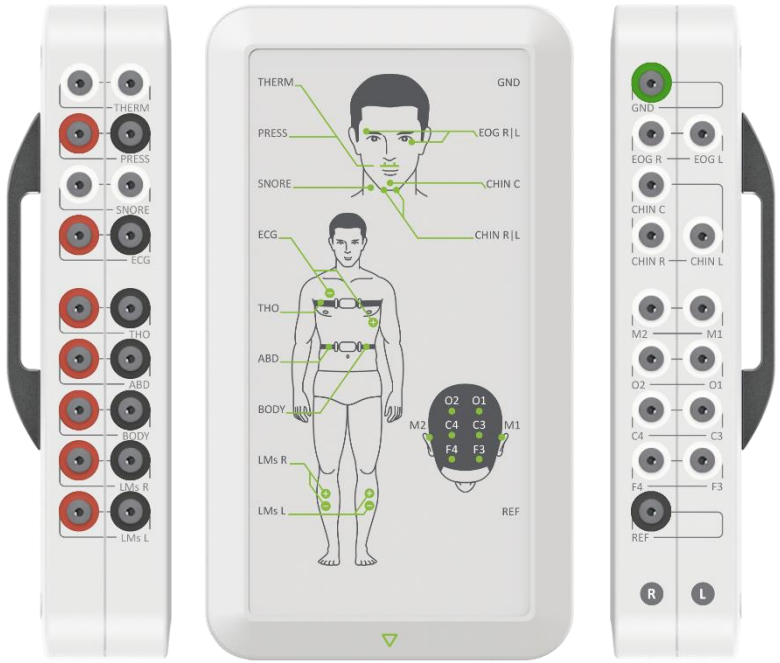
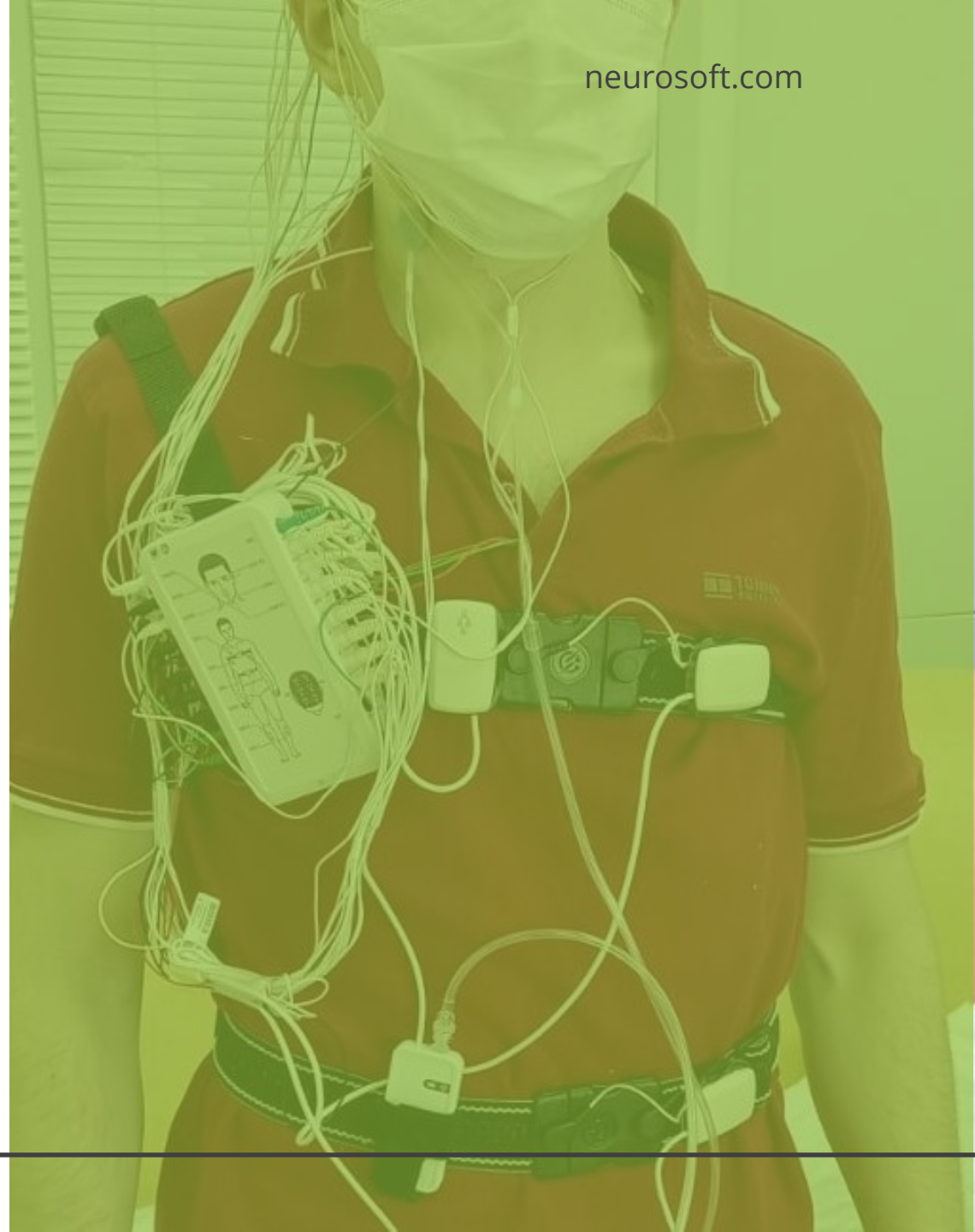
Attended Polysomnography (Type I Sleep Monitor)

Neuron-Spectrum-65/PSG

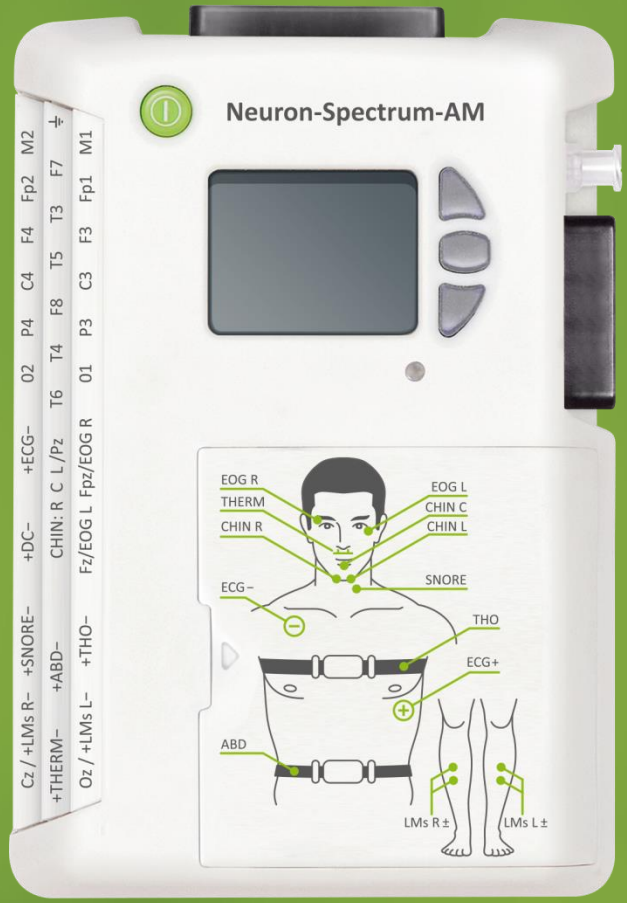
Patient unit



Placing of PSG Sensors and Patient Unit



Neuron-Spectrum-AM
Portable Sleep Monitor

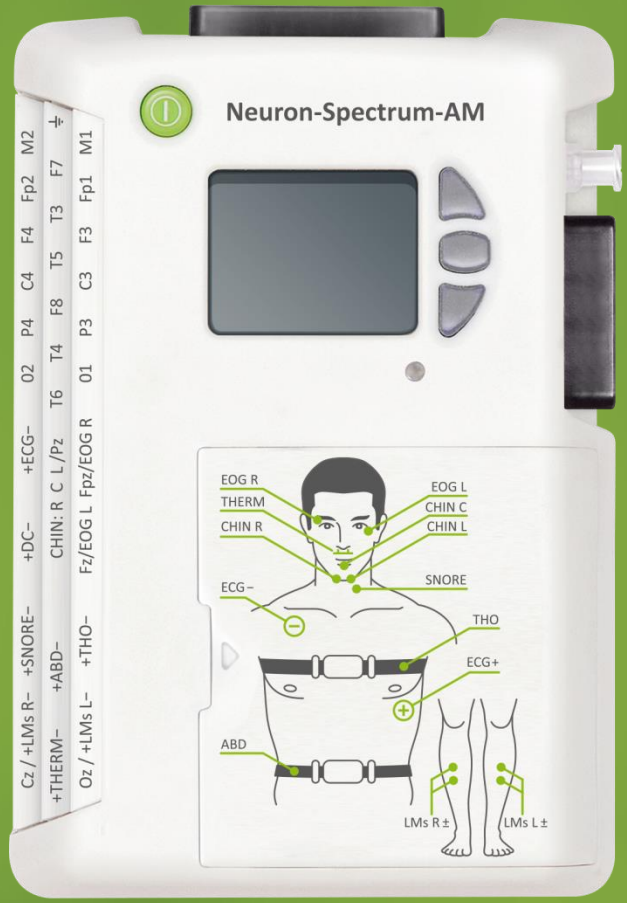


Neuron-Spectrum-AM
Type I, Type II and Type III
Sleep Monitor

Features:

1. Full range of PSG channels in compliance with the AASM recommendations
2. Record of obtained data to the PC memory or/and to the device memory card
3. Synchronous video monitoring
4. More than 24 hours of operation without battery changing

Neuron-Spectrum-AM
Portable Sleep Monitor



Neuron-Spectrum-AM
Type I, Type II and Type III
Sleep Monitor

Types of Sleep Studies:

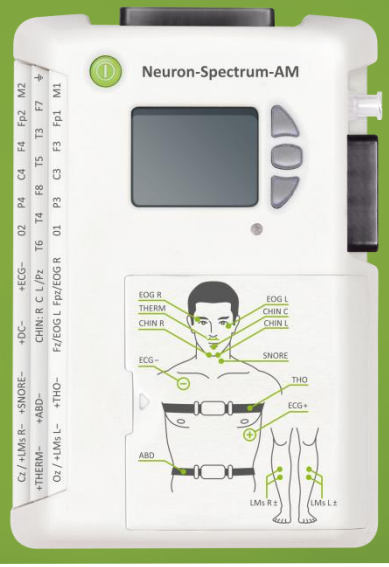
1) Routine PSG (**In-Lab and Out-of-Center** polysomnography)
2) PAP Titration under PSG Control
3) Split-Night PSG Test
4) Multiple Sleep Latency Test (MSLT)
5) Maintenance of Wakefulness Test (MWT)
6) Home Sleep Apnea Testing (HSAT)

Neuron-Spectrum-AM Configurations

Type of Sleep Monitor according to the AASM classification	Software application	Video monitoring	Types of Studies
Type I (Advanced)	EEG+PSG	**Yes**	**1) EEG monitoring (21 EEG channels)** **2) All types of PSG studies** **2) EEG(16 channels)+PSG**
Type I (In-Lab Testing) Type II (Out-of-Center Sleep Testing)	PSG	**Yes** **YES** (with notebook) **NO** (Record of data only to the memory card)	**1) All types of PSG studies**
Type III Portable monitor	HSAT	No	**1) Respiratory monitoring**

You can extend the functionality of your Neuron-Spectrum.NET software

We have 15 Years of Experience in Polysomnography



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Thank You!

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