ΔΗΜΟΚΡΙΤΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΡΑΚΗΣ | DEMOCRITUS UNIVERSITY OF THRACE

16:00-17:30 **Στρογγυλή Τράπεζα**

Ο ρόλος του εργαστηρίου ύπνου: πέρα από τους ασθενείς με σύνδρομο απνοιών-υποπνοιών

Προεδρείο: *Α. Αμφιλοχίου - Ε. Βαγιάκης*

Ο ρόλος του εργαστηρίου ύπνου σε ασθενείς με νευρομυϊκά νοσήματα
Κ. Λάμπρου

Ο ρόλος του εργαστηρίου ύπνου σε ασθενείς με σύνδρομο παχυσαρκίας-υποαερισμού
Γ. Τρακαδά

Ο ρόλος του εργαστηρίου ύπνου σε ασθενείς με καρδιακή ανεπάρκεια
Κ. Βλάμη

Μη αναπνευστικές διαταραχές του ύπνου
Π. Στειρόπουλος

Πασχάλης Στειρόπουλος

Αναπληρωτής Καθηγητής Πνευμονολογίας

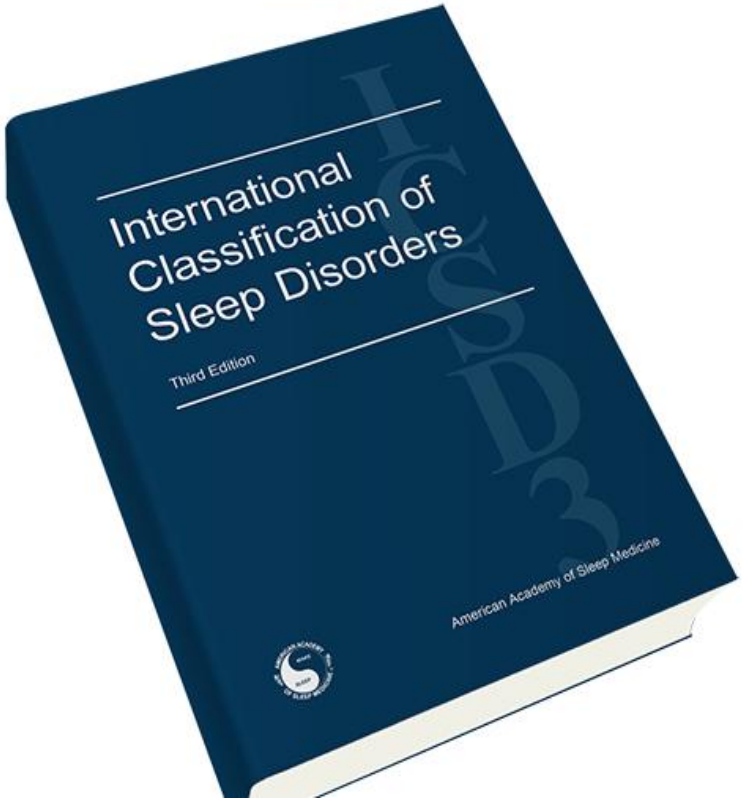
Τμήμα Ιατρικής ΔΠΘ

Δομή

- Εισαγωγή
- Διαγνωστικά εργαλεία στην Ιατρική του Ύπνου
- Μη αναπνευστικές διαταραχές του ύπνου
- Διερεύνηση ημερήσιας υπνηλίας

International Classification of Sleep Disorders

Third Edition



ICSD- 3
Non-respiratory sleep disorders

- Insomnia disorders (mainly chronic insomnia disorder)
- Central disorders of hypersomnolence
  - *Narcolepsy type 1 and 2*
  - *Idiopathic hypersomnia etc*
- Circadian rhythm sleep–wake disorders (i.e. delayed and advanced sleep–wake phase disorders, Jet lag disorder)
- Parasomnias
  - *NREM related (Disorders of arousal from NREM: Sleepwalking)*
  - *REM related (RBD)*
  - *Other (Sleep enuresis) etc*
- Sleep-related movement disorders (i.e. RLS, PLMD)
- Other sleep disorder (i.e. Sleep-related epilepsy, substance induced sleep disorders)

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Assessment of Sleep Disorders

- Sleep History
- Clinical Examination
- Daily Self-Monitoring (Sleep Diary)
- Self-Report Questionnaires
- Polysomnography ± video recording
- Actigraphy
- Multiple sleep latency test (MSLT)
- Maintenance of wakefulness test (MWT)

Bathgate CJ & Edinger JD. Handbook of Sleep Disorders in Medical Conditions, 2019

Sleep History

- ✓ Presenting Sleep-Related Symptom (onset duration, frequency, predisposing factors)
- ✓ Sleep Schedule and Sleep Hygiene
- ✓ Time of Symptoms (during the sleep period)
- ✓ Daytime Functioning (daytime sleepiness, mood disturbance, impaired school or work performance..)
- ✓ Nocturnal Symptoms
- ✓ Use of Sleep Aids and Stimulants

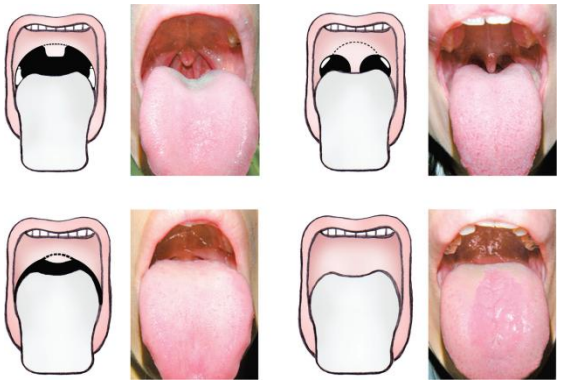
- ❖ *Information from the patient, medical record, and any available bed partner*

American Academy of Neurology. Continuum 2013;19(1):32–49

Clinical Examination

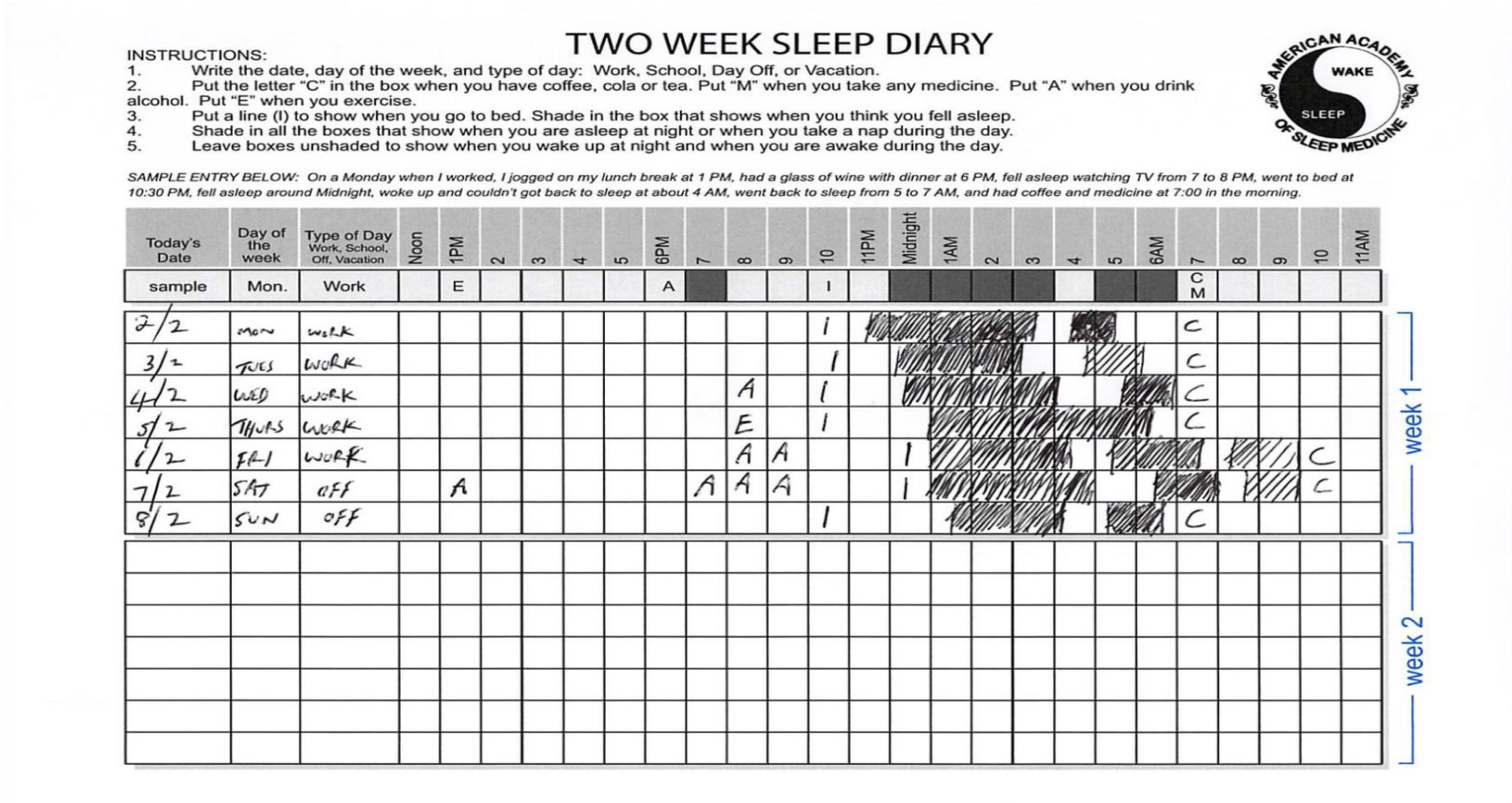
Retrognathia

- Head and Neck Examination
- Anthropometrics
  - weight, height, BMI
  - neck, hip, waist circumference
  - blood pressure and heart rate
- Facial morphology, nasal airway patency, and oral airway crowding
- Anterior and posterior dentition
- Focused
  - mental status
  - symptoms of RLS in DM, CKD



Modified Mallampati, Class I-IV

Sleep Diary



TWO WEEK SLEEP DIARY

INSTRUCTIONS:
1. Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation.
2. Put the letter "C" in the box when you have coffee, cola or tea. Put "M" when you take any medicine. Put "A" when you drink alcohol. Put "E" when you exercise.
3. Put a line (I) to show when you go to bed. Shade in the box that shows when you think you fell asleep.
4. Shade in all the boxes that show when you are asleep at night or when you take a nap during the day.
5. Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

AMERICAN ACADEMY OF SLEEP MEDICINE — WAKE / SLEEP

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn't got back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7:00 in the morning.

Today's Date	Day of the week	Type of Day Work, School, Off, Vacation	Noon	1PM	2	3	4	5	6PM	7	8	9	10	11PM	Midnight	1AM	2	3	4	5	6AM	7	8	9	10	11AM
sample	Mon.	Work		E					A				I									C M				
2/2	MON	WORK											I									C				
3/2	TUES	WORK											I									C				
4/2	WED	WORK									A		I									C				
5/2	THURS	WORK									E		I									C				
6/2	FRI	WORK									A	A			I										C	
7/2	SAT	OFF		A						A	A	A			I										C	
8/2	SUN	OFF											I									C				

week 1

week 2

A daily sleep diary helps to summarize a patient's ***sleep-wake schedule more accurately than memory*** often allows and can ***facilitate construction of personalized plans for management of circadian rhythm sleep disorders and insomnia.***

Questionnaires

- Berlin
- STOP-BANG
- Epworth sleepiness scale
- Athens insomnia and insomnia severity index
- Pittsburgh sleep quality index
- Restless legs syndrome scale
- Dysfunctional Beliefs About Sleep Questionnaire

American Academy of Neurology. Continuum 2013;19(1):32–49

Actigraphy

- Φορητή συσκευή καταγραφής κινήσεων για μεγάλη διάρκεια

- **Διαταραχές κιρκάδιου ρυθμού**
  advanced sleep phase syndrome (ASPS)
  delayed sleep phase syndrome (DSPS)
  shift-work disorder

- **Υπολογισμός συνολικού χρόνου ύπνου σε ειδικές ομάδες ασθενών που**
  1. δε μπορούν να υποβληθούν σε PSG
  2. ασθενείς με υπερυπνία
  3. μικρής ηλικίας ή σε οίκους ευγηρίας

- **Εκτίμηση της αγωγής για υπνηλία και διαταραχές κιρκάδιου ρυθμού**

Actigraphy

- Ρολόι καρπού, στο μη επικρατητικό άνω άκρο
- Διάρκεια καταγραφής 7 μέρες
- Βασίζεται στην αρχή της κίνησης. Στον ύπνο ↓, στην εγρήγορση ↑

- Η δραστηριότητα αθροίζεται ανά ‘’ και αποθηκεύεται ανά 1’ εποχές
- Αλγόριθμοι αναλύουν τα αποτελέσματα δίνοντας τιμές για:
  Συνολικό χρόνο ύπνου
  Συνολικό χρόνο εγρήγορσης
  Αφυπνίσεις
  Έλευση ύπνου

PRACTICE PARAMETER

Practice Parameters for Clinical Use of the Multiple Sleep Latency Test and the Maintenance of Wakefulness Test

An American Academy of Sleep Medicine Report

Standards of Practice Committee of the American Academy of Sleep Medicine

1. **The MSLT is a validated objective measure of the ability or tendency to fall asleep. [2.2; 2.5; 2.6; 2.7; 6.2.7] (Standard)**

2. **The MWT is a validated objective measure of the ability to stay awake for a defined time. [2.3; 2.4; 2.5; 6.2.1; 6.2.7] (Standard)**

Μελέτη ύπνου το προηγούμενο βράδυ – εκτίμηση ύπνου και αποκλεισμός άλλων διαταραχών ύπνου

MSLT – multiple sleep latency test

Καλωδίωση: EEG, EOG, EMG, EKG
5 Test (max) ανά 2 ώρες
Διάρκεια κάθε τεστ 20 Min

Στα διαλείμματα : Επιτήρηση, (τεστ εγρήγορσης)

MSLT

- ***gold standard test για εκτίμηση της EDS***
- Αντικειμενική μέτρηση της τάσης να κοιμηθεί
- Παραδοσιακά στη ναρκοληψία
- Εκτίμηση σοβαρότητας της EDS σε ασθενείς με άλλες διαταραχές ύπνου:

  1. Ιδιοπαθής υπερυπνία
  2. Εκτίμηση αποτελεσματικότητας θεραπείας σε EDS

MSLT

- **MSL < 5 min ενδεικτικό παθολογικής υπερυπνίας**
- **MSL > 5 min και <10 min γκρίζα ζώνη**
- **MSL > 10 min είναι φυσιολογικό**
- 2 ή > SOREMPs είναι παθολογικό και ενδεικτικό ναρκοληψίας (SOREMPs, sleep onset REM periods)

- 2 ή περισσότερα SOREMPs με MSL<8 min είναι ενδεικτικά ναρκοληψίας
- ασθενείς με ναρκοληψία μπορεί να έχουν <2 SOREMPs στο MSLT
- Ναρκοληψία και καταπληξία 26% ασθενών είχαν 0–1 SOREMPs
- Ναρκοληψία χωρίς καταπληξία 9%

MWT

- Η δυνατότητα να μείνεις ξύπνιος είναι διαφορετική από την τάση για να κοιμηθείς
- Το MWT αποτελείται από 4 προσπάθειες, 40λεπτες με μεσοδιάστημα 2 ωρών, έναρξη 1.5 με 3 ώρες μετά την αφύπνιση
- Κάθε προσπάθεια διαρκεί 40 λεπτά

Η ικανότητα να παραμείνεις σε εγρήγορση υποστηρίζεται καλύτερα εάν δεν κοιμηθείς σε καμία από τις 4 προσπάθειες

PRACTICE PARAMETER

Practice Parameters for the Indications for Polysomnography and Related Procedures: An Update for 2005

Clete A. Kushida, MD, PhD[1]; Michael R. Littner, MD[2]; Timothy Morgenthaler, MD[3]; Cathy A. Alessi, MD[4]; Dennis Bailey, DDS[5]; Jack Coleman, Jr., MD[6]; Leah Friedman, PhD[7]; Max Hirshkowitz, PhD[8]; Sheldon Kapen, MD[9]; Milton Kramer, MD[10]; Teofilo Lee-Chiong, MD[11]; Daniel L. Loube, MD[12]; Judith Owens, MD[13]; Jeffrey P. Pancer, DDS[14]; Merrill Wise, MD[15]

gold standard που χρησιμοποιείται για τη Ν/Φ εκτίμηση διαταραχών ύπνου

American Academy of Sleep Medicine

Guideline Update

March 2017

Table 2—AASM levels of recommendations

Term	Definition
Standard	This is a generally accepted patient-care strategy, which reflects a high degree of clinical certainty. The term standard generally implies the use of Level I Evidence, which directly addresses the clinical issue, or overwhelming Level II Evidence.
Guideline	This is a patient-care strategy, which reflects a moderate degree of clinical certainty. The term guideline implies the use of Level II Evidence or a consensus of Level III Evidence.
Option	This is a patient-care strategy, which reflects uncertain clinical use. The term option implies either inconclusive or conflicting evidence or conflicting expert opinion.

Adapted from Eddy.[4] Reprinted with permission from the American College of Physicians.

Table 1 Polysomnogram Montage*

Parameter	Derivation
EEG	F3-M2
	F4-M1
	C3-M2
	C4-M1
	O1-M2
	O2-M1
EOG	E1-M2
	E2-M1
EMG	Chin
	Anterior tibialis
Respiration	Airflow
	Thoracic/abdominal effort
Oximetry	———
Capnography	End tidal CO2 or TcCO2
ECG	Modified Lead II

Polysomnography

1. PSG is routinely indicated for the diagnosis of sleep related breathing disorders (Standard)

2. PSG is indicated for PAP titration in patients with sleep related breathing disorders (Standard)

3. PSG and a multiple sleep latency test performed on the day after the polysomnographic evaluation are routinely indicated in the evaluation of suspected narcolepsy (Standard)

J Clin Sleep Med. 2017;13(3):479–504.

Polysomnography

4. PSG with additional EEG derivations and video recording:
   - ✓ diagnosis of paroxysmal arousals or other sleep disruptions that are thought to be seizure related when the initial clinical evaluation and results of a standard EEG are inconclusive (Option)
   - ✓ sleep related behaviors that are violent or otherwise potentially injurious to the patient or others (Option)
   - ✓ sleep behaviors suggestive of parasomnias that are unusual or atypical (Guideline)
   - ✓ in forensic considerations (Option)
   - ✓ parasomnia or sleep related seizure disorder does not respond to conventional therapy (Option)

J Clin Sleep Med. 2017;13(3):479–504.

Polysomnography

5. Polysomnography is indicated when a diagnosis of periodic limb movement disorder is considered because of complaints by the patient or an observer of repetitive limb movements during sleep and frequent awakenings, fragmented sleep, difficulty maintaining sleep, or excessive daytime sleepiness (Standard)

J Clin Sleep Med. 2017;13(3):479–504.

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- Εισαγωγή
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Insomnia

- Insomnia is primarily diagnosed by clinical evaluation through a thorough sleep history and detailed medical, substance, and psychiatric history **(Standard)**

- The sleep history should cover specific insomnia complaints, pre-sleep conditions, sleep-wake patterns, other sleep-related symptoms, and daytime consequences **(Consensus)**

- The history helps to establish the type and evolution of insomnia, perpetuating factors, and identification of comorbid medical, substance, and/or psychiatric conditions **(Consensus)**

- Instruments which are helpful in the evaluation and differential diagnosis of insomnia include self-administered questionnaires, at-home sleep logs, symptom checklists, psychological screening tests, and bed partner interviews **(Guideline)**

Sateia MJ, J Clin Sleep Med. 2017;13(2):307–349

Insomnia

Questionnaire

Epworth Sleepiness Scale

Insomnia Severity Index

Pittsburgh Sleep Quality Index

Beck Depression Inventory

State-Trait Anxiety Inventory-
Form Y Trait Scale

Fatigue Severity Scale

Short Form Health Survey (SF-36)

Dysfunctional Beliefs and Attitudes
about Sleep Questionnaire

Sateia MJ, J Clin Sleep Med. 2017;13(2):307–349

Insomnia

- Polysomnography and daytime multiple sleep latency testing (MSLT) are not indicated in the routine evaluation of chronic insomnia, including insomnia due to psychiatric or neuropsychiatric disorders **(Standard)**

  PSG is indicated when there is reasonable clinical suspicion of breathing (sleep apnea) or movement disorders, when initial diagnosis is uncertain, treatment fails (behavioral or pharmacologic), or precipitous arousals occur with violent or injurious behavior **(Guideline)**

- Actigraphy can be useful in evaluation and treatment of circadian rhythm sleep disorders and in management of insomnia

Sateia MJ, J Clin Sleep Med. 2017;13(2):307–349

Insomnia

Table 6—Common Comorbid Psychiatric Disorders and Symptoms

Category	Examples
Mood disorders	Major depressive disorder, bipolar mood disorder, dysthymia
Anxiety disorders	Generalized anxiety disorder, panic disorder, posttraumatic stress disorder, obsessive compulsive disorder
Psychotic disorders	Schizophrenia, schizoaffective disorder
Amnestic disorders	Alzheimer disease, other dementias
Disorders usually seen in childhood and adolescence	Attention deficit disorder
Other disorders and symptoms	Adjustment disorders, personality disorders, bereavement, stress

Table 7—Common Contributing Medications and Substances

Category	Examples
Antidepressants	SSRIs (fluoxetine, paroxetine, sertraline, citalopram, escitalopram, fluvoxamine), venlafaxine, duloxetine, monoamine oxidase inhibitors
Stimulants	Caffeine, methylphenidate, amphetamine derivatives, ephedrine and derivatives, cocaine
Decongestants	Pseudoephedrine, phenylephrine, phenylpropanolamine
Narcotic analgesics	Oxycodone, codeine, propoxyphene
Cardiovascular	β-Blockers, α-receptor agonists and antagonists, diuretics, lipid-lowering agents
Pulmonary	Theophylline, albuterol
Alcohol	

Comorbidities and medications when evaluating patients with insomnia

Sateia MJ, J Clin Sleep Med. 2017;13(2):307–349

ΝΑΡΚΟΛΗΨΙΑ *("λαμβάνω νάρκη")*

- Πάθηση του Κ.Ν.Σ. (αυτοάνοση – ΝΚ)
- Διαταραχή, που χαρακτηρίζεται από την **τυπική ναρκοληπτική τετράδα** συμπτωμάτων:

  - Υπερβολική Ημερήσια Υπνηλία - **EDS** (100%)
  - **Καταπληξία** (70%)
  - **Υπνική Παράλυση** (25-70%)
  - **Ψευδαισθήσεις** (υπναγωγικές/υπνοπομπικές) (50-70%)

Και τα 4 συμπτώματα: 19%

Narcolepsy

- Narcolepsy can be divided into narcolepsy with and without cataplexy

  κατά ICSD-3

  type 1 -> hypocretin-deficiency (without cataplexy)

  type 2-> loss of hypocretin cells in the hypothalamus

- Cataplexy: the only specific symptom of narcolepsy

  sudden bilateral loss of skeletal muscle tone, with preserved consciousness, elicited by emotions

Narcolepsy

Box 14.1 Types of narcolepsy

Narcolepsy type 1

Criteria A and B must be met

A. The patient has daily periods of irrepressible need to sleep or daytime lapses into sleep occurring for at least three months.[1]

B. The presence of one or both of the following:

1. Cataplexy (as defined under Essential Features in ICSD-3, reference 5) *and* a mean sleep latency of ≤8 minutes and two or more sleep onset REM periods (SOREMPs) on an MSLT performed according to standard techniques. A SOREMP (within 15 minutes of sleep onset) on the preceding nocturnal polysomnogram may replace one of the SOREMPs on the MSLT.[2]
2. CSF hypocretin-1 concentration, measured by immunoreactivity, is either ≤110 pg/mL or <1/3 of mean values obtained in normal subjects with the same standardized assay.

Narcolepsy type 2

Criteria A–E must be met

A. The patient has daily periods of irrepressible need to sleep or daytime lapses into sleep occurring for at least three months.

B. A mean sleep latency of ≤8 minutes and two or more sleep onset REM periods (SOREMPs) are found on an MSLT performed according to standard techniques. A SOREMP (within 15 minutes of sleep onset) on the preceding nocturnal polysomnogram may replace one of the SOREMPs on the MSLT.

C. Cataplexy is absent.[1]

D. *Either* CSF hypocretin-1 concentration has not been measured *or* CSF hypocretin-1 concentration measured by immunoreactivity is either >110 pg/mL *or* >1/3 of mean values obtained in normal subjects with the same standardized assay.[2]

E. The hypersomnolence and/or MSLT findings are not better explained by other causes such as insufficient sleep, obstructive sleep apnea, delayed sleep phase disorder, or the effect of medication or substances or their withdrawal.

Source data from American Academy of Sleep Medicine, International classification of sleep disorders, 3rd ed., Copyright (2014) American Academy of Sleep Medicine.

Narcolepsy

- Polysomnography and a multiple sleep latency test performed on the day after the polysomnographic evaluation are routinely indicated in the evaluation of suspected narcolepsy

- The minimum channels required for the diagnosis of narcolepsy include EEG, EOG, chin EMG, and ECG

- Additional cardiorespiratory channels and anterior tibialis recording is recommended

  (OSA, PLMS, UARS)

J Clin Sleep Med. 2017;13(3):479–504.

RLS
is included with sleep-related movement disorders but should be considered as an exception to this category: RLS is not diagnosed during sleep, but it can affect sleep

RLS

περίεργη αίσθηση «ενόχλησης» στα πόδια (συχνά περιγράφεται ως μαρτύριο), που συνδέεται με μια **επιτακτική ανάγκη κίνησης τους και με την αδυναμία να μείνει ο ασθενής ακίνητος**.

Αυτή η δυσάρεστη αίσθηση της «ανησυχίας» αφορά **κυρίως στα κάτω άκρα** (κυρίως από τα γόνατα έως τους αστραγάλους) και προσδιορίζεται ως **βαθειά και εσωτερική**.

Τέλος, το RLS **είτε εμφανίζεται αποκλειστικά είτε χειροτερεύει κατά πολύ τις απογευματινο-βραδινές ώρες**.

RLS

Η νόσος ανήσυχων άκρων – Διαγνωστικά κριτήρια:

- Ακρώνυμο **URGES** [Hening, W. & Trenkwalder]
- **U: u**rge to move the legs usually associated with unpleasant leg sensations
- **R:** rest induces symptoms
- **G:** getting active brings relief
- **E:** evening and night deteriorate symptoms
- **S: s**ole explanation for urge to move (5th new criterion -2014)

RLS

5ο κριτήριο (Νέα κριτήρια 2014):
Η εμφάνιση των πιο πάνω συμπτωμάτων **δεν μπορεί να αποδοθεί στα πλαίσια άλλων ιατρικών ή συμπεριφορικών καταστάσεων** (π.χ. μυαλγία, φλεβική στάση, οιδήματα κάτω άκρων, αρθρίτιδα, κράμπες, δυσφορία λόγω θέσης, νευρικό συνεχόμενο χτύπημα των ποδιών)

Υποστηρικτικά κριτήρια:
- Οικογενειακό **ιστορικό**
- Απαντά στην **ντοπαμινεργική** αγωγή
- Περιοδικές κινήσεις κάτω άκρων (Periodic Leg Movements – **PLMs**)

Στοιχεία που συνδέονται:
- Η κλινική πορεία της νόσου είναι συνήθως **χρόνια και προοδευτική**
- Η ενόχληση στον ύπνο αφορά συνήθως το **πρώτο μέρος** αυτού
- Η νευρολογική εκτίμηση είναι συνήθως **αρνητική** (πλην συνοσηρότητας)

RLS

Η διάγνωση είναι **κλινική**

PSG γίνεται μόνο σε περίπτωση που:

1. Υφίστανται αμφιβολίες στη διάγνωση
2. Πρόκειται για άτυπες μορφές/συμπτώματα και στην περίπτωση που αναζητώνται συνοσηρότητες (π.χ. ΣΑΥ)
3. Ασθενείς σε ικανοποιητική θεραπευτική αντιμετώπιση (φάρμακο και δόσεις), αλλά εμμένων «κακός» ύπνος. Διερεύνηση άλλης υπνικής συνοσηρότητας
4. Ιδιαίτεροι πληθυσμοί ασθενών, όπου π.χ. υπάρχει σκεπτικισμός στη λήψη φ.α. (π.χ. ντοπαμινεργικά φάρμακα σε παιδιά)

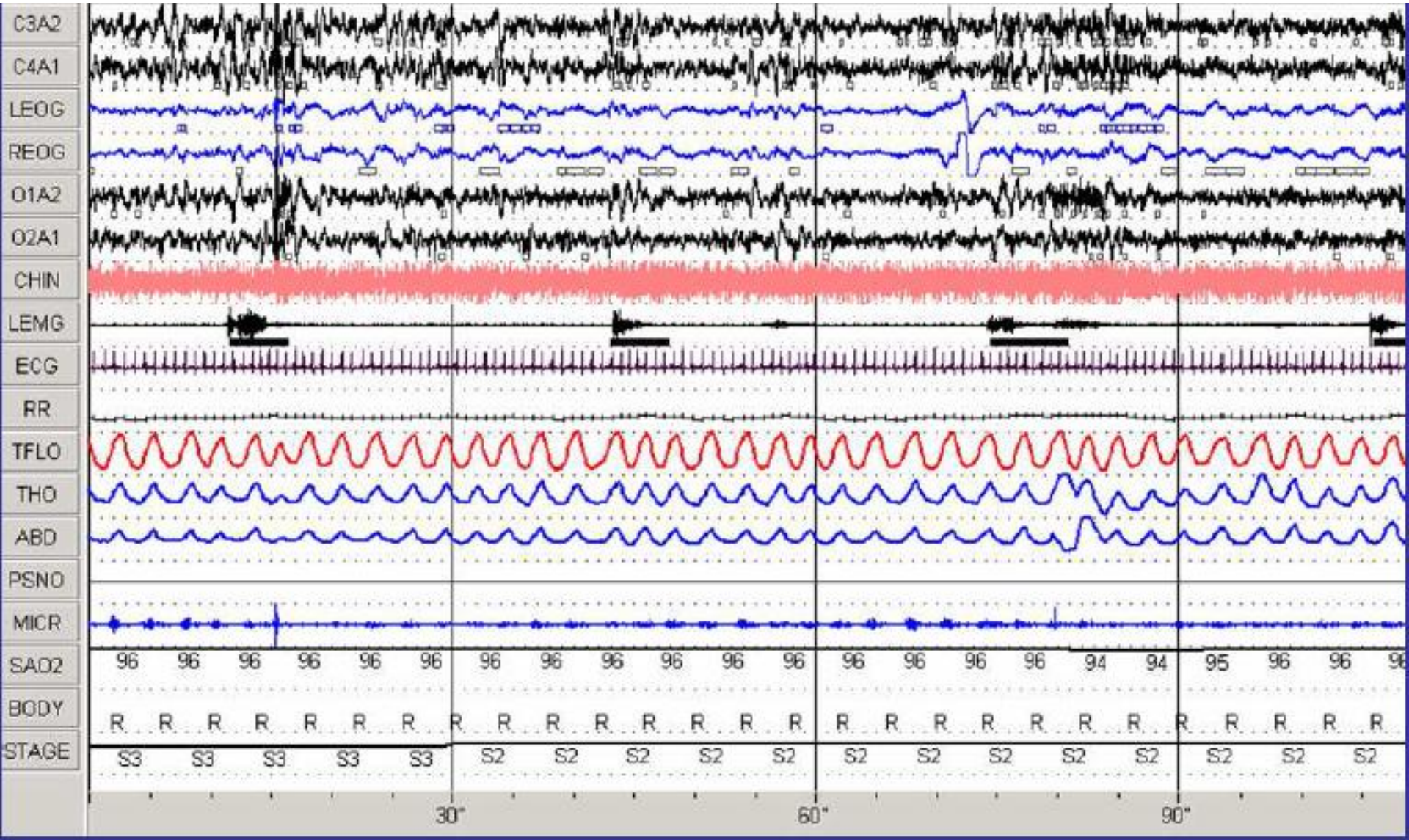
Evaluation

- Polysomnography (PSG): Not routinely indicated
- Actigraphy: Leg activity monitor
- Suggested Immobilization Test (SIT):
  - Records periodic limb movements in wakefulness
  - Voluntarily remain still for 1 hour
  - EMG recording from tibialis anterior muscles, EEG shows awake state
  - PLM-awake index > 40

RLS - Suggested Immobilization Test (SIT)

May be used in addition to PSG to assess PLM at wakefullness (PLMW)
patient sits on bed with legs outstretched, instructed to stay awake and not to move legs. Test duration usually 60 min.

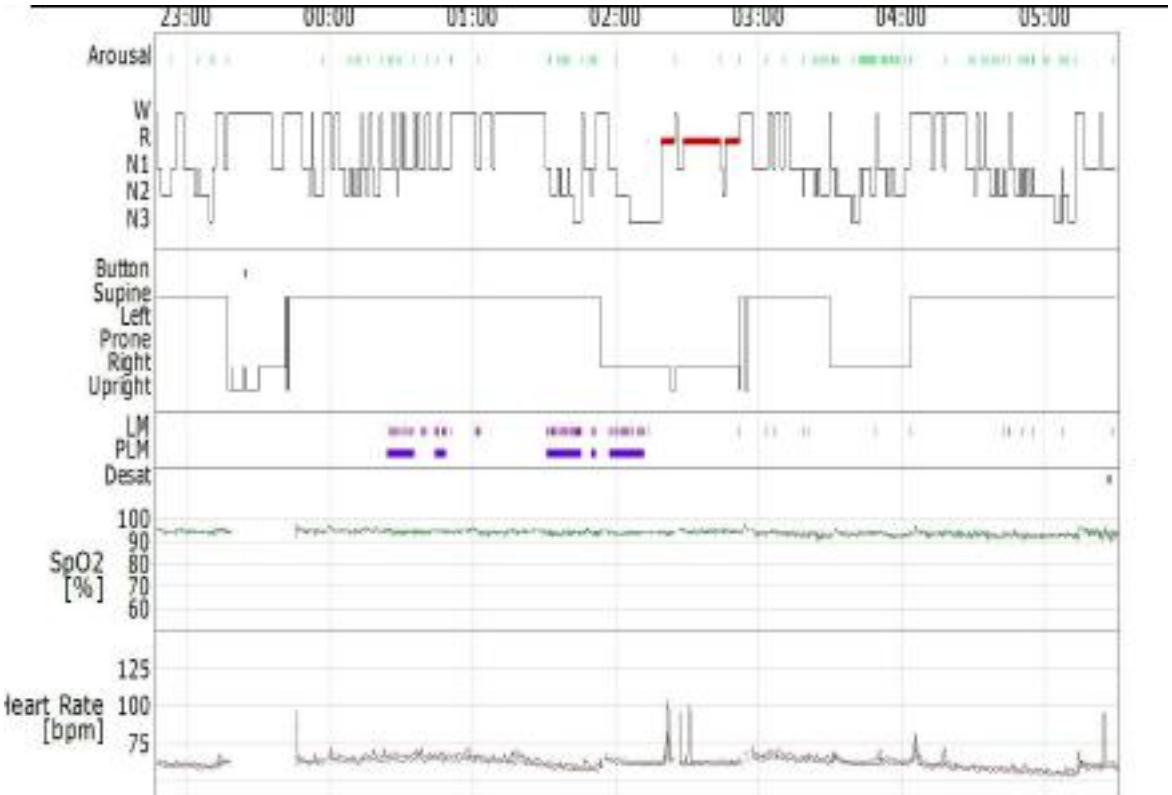
Περιοδικές Κινήσεις Κάτω Άκρων (Periodic Leg Movement PLM/PLMD)



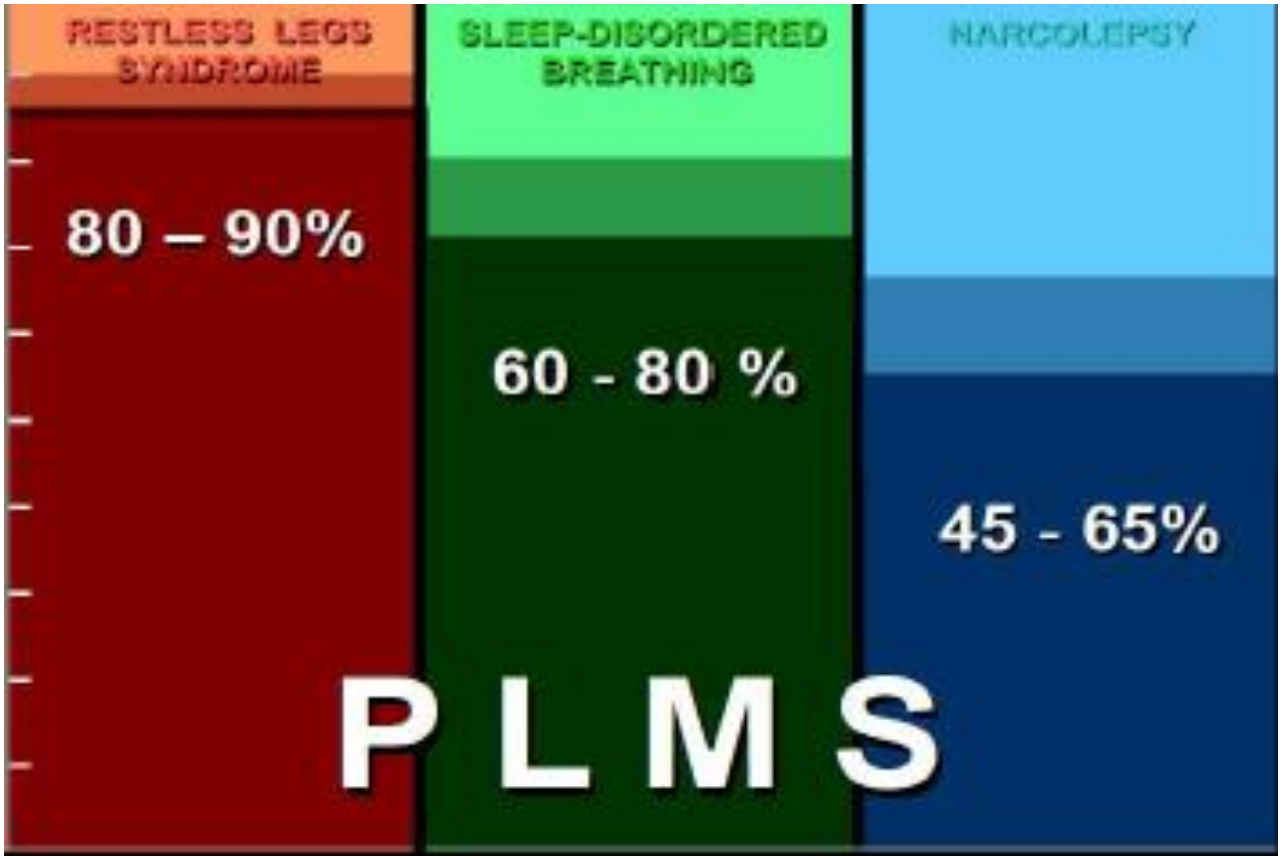
Περιοδικές Κινήσεις Κάτω Άκρων (Periodic Leg Movement PLM/PLMD)

Θεωρούνται παθολογικές οι κινήσεις αυτές εφόσον είναι >15/h (και >5/h για τα παιδιά)

Εφόσον οι κινήσεις αυτές είναι υπεύθυνες για διαταραχή του ύπνου (arousals/awakenings/μεταβολή στη φυσιολογική αρχιτεκτονική του ύπνου) με επακόλουθο ημερήσια συμπτώματα (π.χ. Υπνηλία, κόπωση, κακή διάθεση κλπ, τότε μιλάμε για PLMD (Disorder)



Οι PLM είναι παθογνωμονικές για το RLS, αλλά δεν είναι ειδικές για αυτό



Sleep-related movements

Sleep-related movements are commonly seen during PSG and are *often benign and incidental* when PSG is being performed for another indication

1. **Periodic limb movements of sleep (PLMS)** are observed on the leg surface electromyography (EMG) channel(s) of a PSG measured from the anterior tibialis
   - PLMS index >15 events/hour (>5 events/hour for children) be evaluated for secondary etiologies, including: PLMD, RLS, OSA, Renal Failure, Iron Deficiency
2. **Sleep-related leg cramps**
3. **Sleep-related bruxism:** repetitive jaw-muscle activity
4. **Sleep-related rhythmic movements**: repetitive, stereotyped, and rhythmic motor behaviors
5. **Hypnic jerks**: sudden, brief, simultaneous contractions of the body
6. **Myoclonus**

Walters AS. Chest. 2007;131(4):1260

Parasomnias

Parasomnias are undesirable physical events or experiences that occur during entry into sleep, within sleep, or during arousal from sleep. Parasomnias may occur during non-rapid eye movement sleep (NREM), rapid eye movement sleep (REM), or during transitions to and from sleep.

Parasomnias encompass abnormal sleep related complex movements, behaviors, emotions, perceptions, dreams, and autonomic nervous system activity. Parasomnias are clinical disorders because of the resulting injuries, sleep disruption, adverse health effects, and untoward psychosocial effects. The clinical consequences of the parasomnias can affect the patient, the bed partner, or both.

Back

NREM-Related Parasomnias

Disorders of Arousal (From NREM Sleep)

Confusional Arousals

Sleepwalking

Sleep Terrors

Sleep Related Eating Disorder

REM-Related Parasomnias

REM Sleep Behavior Disorder

Recurrent Isolated Sleep Paralysis

Nightmare Disorder

Other Parasomnias

Exploding Head Syndrome

Sleep Related Hallucinations

Sleep Enuresis

Parasomnia Due to a Medical Disorder

Parasomnia Due to a Medication or Substance

Parasomnia, Unspecified

Παραϋπνίες

Διαταραχές της έγερσης (από τον ύπνο NREM)

- Νυκτερινοί τρόμοι (Night Terrors)
- Συγχητικές εγέρσεις (Confusional Arousals)
- Υπνοβασία (Sleepwalking)

Παραϋπνία του ύπνου REM

- Διαταραχή συμπεριφοράς στον ύπνο REM (RBD)
- Επαναλαμβανόμενα επεισόδια υπνικής παράλυσης (Sleep Paralysis)
- Εφιάλτες (Nightmares)

Άλλες Παραϋπνίες

- Νυκτερινή ενούρηση
- Υπνοφαγία (Sleep Related Eating Disorder - SRED)
- Καταθρηνία
- Status Dissociatus

Διαφοροδιάγνωση NREM-REM παραυπνιών

Table. Features of NREM disorders of arousal and REM sleep behaviour disorder

Characteristic	NREM disorders of arousal	REM sleep behaviour disorder
Age of onset	Adolescence and young adult	Late middle age (mean age 59.3 yr)
Clinical course	Usually benign and may decrease with age	May be harbinger of Parkinson's disease or other neurodegenerative diseases
Episode recall	Usually none	Often awakens completely aware
Complex motor activity	Yes	Yes
Sleep stage association	NREM first half of night	REM second half of night
Gender	Male=Female	Predominantly male (90%)

NREM, non rapid eye movement

Ο ασθενής **ανακαλεί το περιεχόμενο των ονείρων**, κατά την αφύπνιση (τυπικό εύρημα REM παραυπνίας)

NREM παραυπνίες **σπάνια** επαναλαμβάνονται το **ίδιο βράδυ**

(Avidan, Semin Neurol 2009)

TABLE 6-4 Differentiating Nocturnal Frontal Lobe Epilepsy and Parasomnias

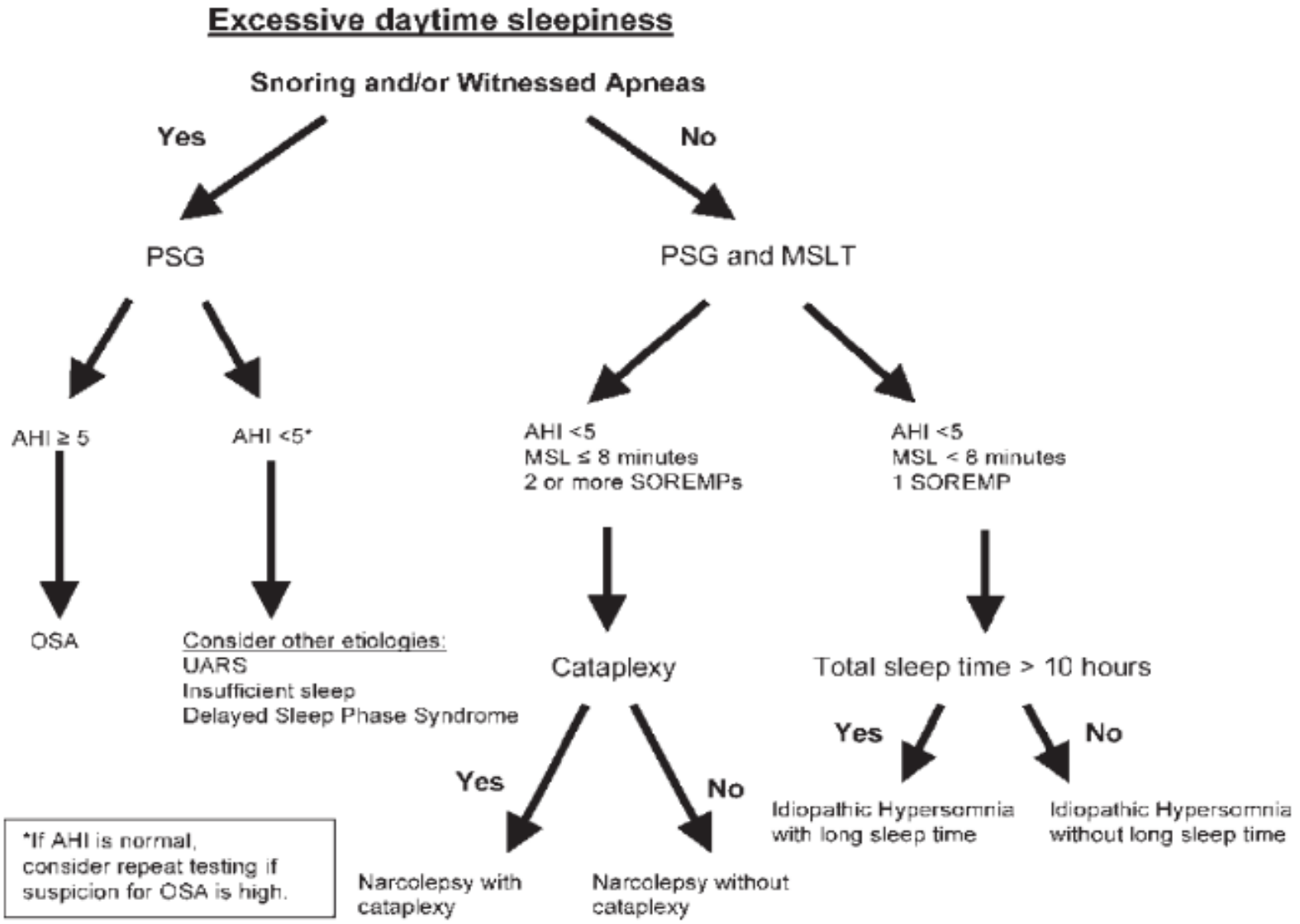
Feature	Nocturnal Frontal Lobe Epilepsy	Arousal Disorders	REM Sleep Behavior Disorder
Age at onset	Variable, typically first or second decade of life	Usually first decade of life	Over 50 years
Sleep stage of origin	Non-REM N1 or N2, sleep-wake transitions	Non-REM N3	REM
Timing of episodes	Anytime	First third of sleep period	Last third of sleep period
Duration of episodes	5 to 60 seconds	2 to 30 minutes	Seconds to 2 minutes
Frequency of episodes	Nightly clusters	Sporadic, rare clusters	Sporadic, rare clusters
Onset and offset	Sudden	Gradual	Sudden
Semiology of episodes	Highly stereotyped, hypermotor, asymmetric tonic/dystonic	Not stereotyped, variable complexity	Not highly stereotyped, vocalizations with self-protective behaviors and dream recall
Level of consciousness during episodes	Usually preserved	Variable	Poorly responsive
Postictal confusion	Typically absent	Present	Absent
Risk of injury	Low	High	Moderate
Video-polysomnography with EEG findings	Epileptic activity in <50%	Slow-wave sleep arousals, rhythmic delta pattern	REM sleep without atonia

Διαφοροδιάγνωση

Evaluation of the patient with excessive daytime sleepiness

- Detailed medical history, including medication
- Laboratory tests, i.e. iron deficiency for RLS, renal failure
- Sleep log->Insufficient sleep
- Polysomnography (PSG)->the majority of sleep disorders
- PSG+ Multiple Sleep Latency Test->Narcolepsy
- Tibial EMG->RLS, PLMD

Evaluation of the patient with excessive daytime sleepiness



Η διαφοροδιάγνωση της υπνηλίας

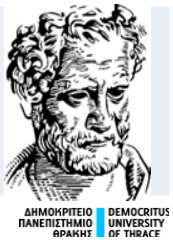
Table 1. Differential Diagnosis of Chronic Daytime Sleepiness.*

Diagnosis	Distinguishing Characteristics
Insufficient sleep	Sleepiness decreases with more sleep on weekends and holidays
Obstructive sleep apnea	Snoring, witnessed episodes of apnea, large tonsils, large tongue, long uvula, obesity
Narcolepsy	Cataplexy, hypnagogic and hypnopompic hallucinations, sleep paralysis, fragmented sleep
Delayed sleep phase disorder	Sleepiness in the morning, alertness at night
Periodic limb movement disorder	Sleep disrupted by kicking movements; often occurs with the restless legs syndrome, iron deficiency, uremia, and neuropathy
Shift-work sleep disorder	Sleepiness when working at night, insufficient sleep during the day
Use of sedating medications	Insomnia medications, opiates, anxiolytics, anticonvulsants, antipsychotics, antidepressants, antihistamines, among others
Idiopathic hypersomnia	Lengthy nighttime sleep and long naps, difficulty waking from sleep
Depression	Increased time in bed but little functional sleepiness on the multiple sleep latency test
Other medical disorders	Symptoms of hypothyroidism, Parkinson's disease, the Prader–Willi syndrome, myotonic dystrophy, among others

Ευχαριστώ πολύ

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΔΗΜΟΚΡΙΤΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΡΑΚΗΣ
ΤΜΗΜΑ ΙΑΤΡΙΚΗΣ
ΑΛΕΞΑΝΔΡΟΥΠΟΛΗ



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"Ιατρική του Ύπνου"