Sleep Medicine Year-in-Review

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Michigan Academy of Sleep Medicine

Accreditation Statement

- This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation
- Council for Continuing Medical Education (ACCME) through the joint providership of The American Academy of Sleep Medicine and the Michigan Academy of Sleep Medicine.
- The American Academy of Sleep Medicine is accredited by the ACCME to provide continuing medical education for physicians.

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Conflict of Interest Disclosures for Speakers

Maria Tovar-Torres, MD has no relevant financial relationships with ineligible companies to disclose.

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Learning Objectives

Upon completion of this course, attendees should be able to:

- Be able to describe the most relevant studies from 2023
- Identify the CV risk associated with comorbid sleep apnea and Insomnia
- Describe the long term efficacy, and side effects of opioids used in RLS patients.
- Describe the current management recommendations in RBD patients.

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-COMISA-

Co-morbid Insomnia
and
Sleep Apnea

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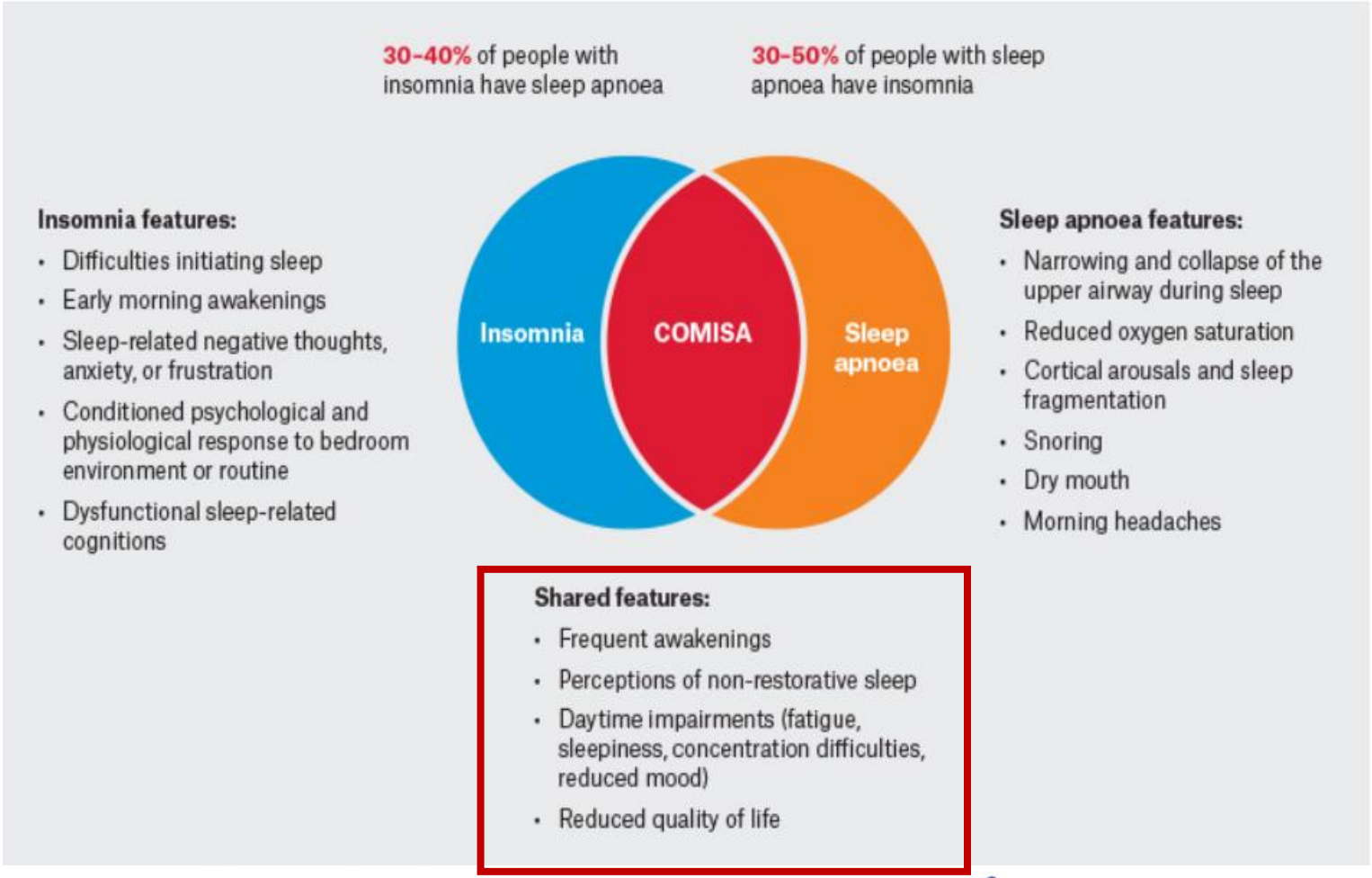
What we know so far ?



Alexander Sweetman. -Co-morbid Insomnia and Sleep Apnea (COMISA): Latest Research from an Emerging Field
Current Sleep Medicine Reports (2023) 9:180–189 https://doi.org/10.1007/s40675-023-00262-9

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What we know so far ?

- More common in females
- Age prevalence
  - Men 45-55 years old
  - Females >55 yo.
- Higher risk for Depression
- Compare to
  - OSA patients: COMISA patients are less likely to accept PAP therapy (~30%)
  - Insomnia patients: Worse mental health, daytime function and decreased QOL.

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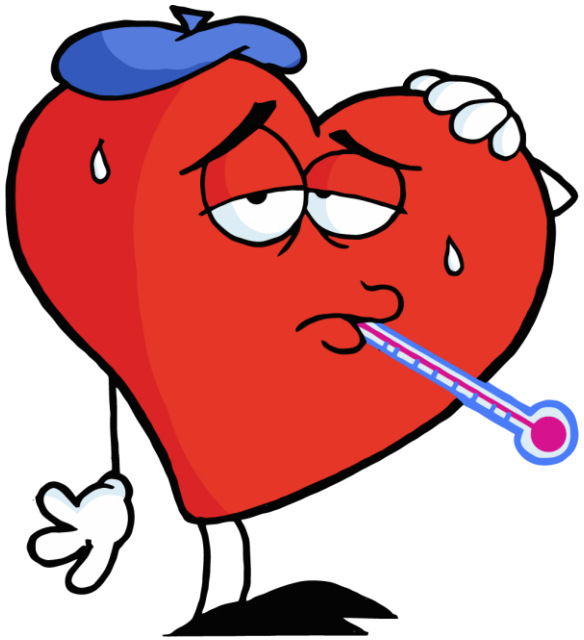

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Life (Basel). 2023 Jun 13;13(6):1379. doi: 10.3390/life13061379.

Article

10-Year Risk for Cardiovascular Disease Associated with COMISA (Co-Morbid Insomnia and Sleep Apnea) in Hypertensive Subjects

Life (Basel). 2023 Jun 13;13(6):1379. doi: 10.3390/life13061379.

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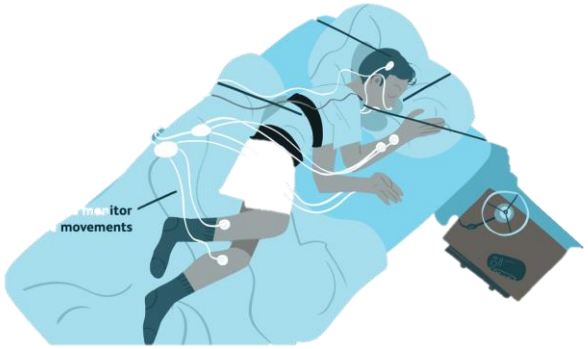

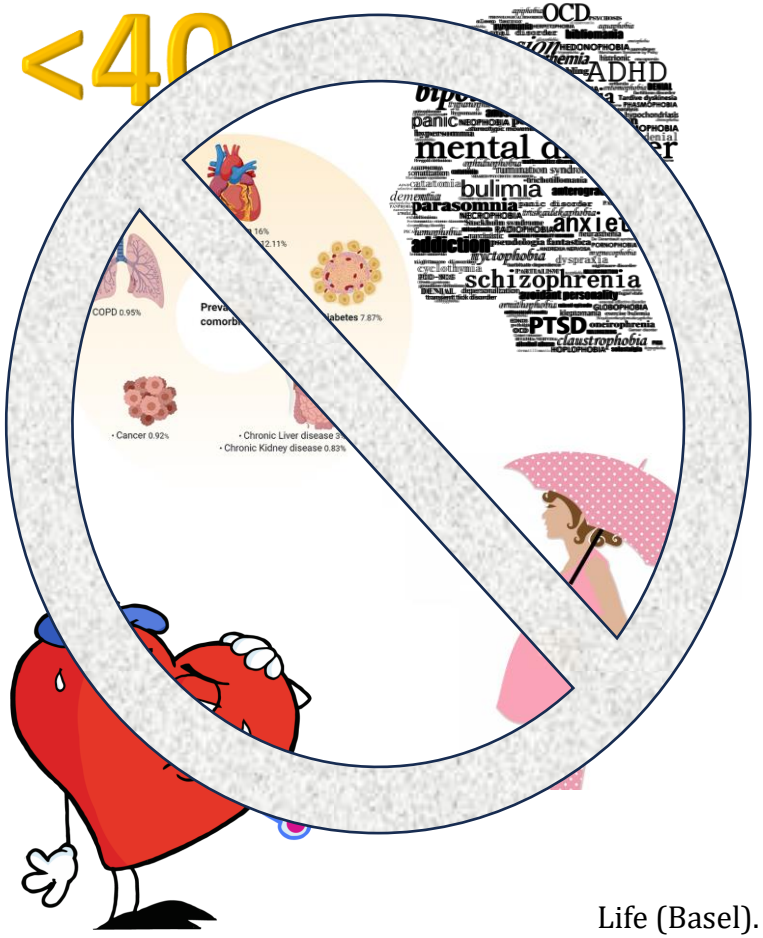

Sleep Assessment

Medical and Psych assessment

Framingham risk score
(FRS)

sex specific algorithm, use to calculate the 10 year CV risk of an individual

High CV Risk
FRS≥10

Low CV Risk
FRS<10

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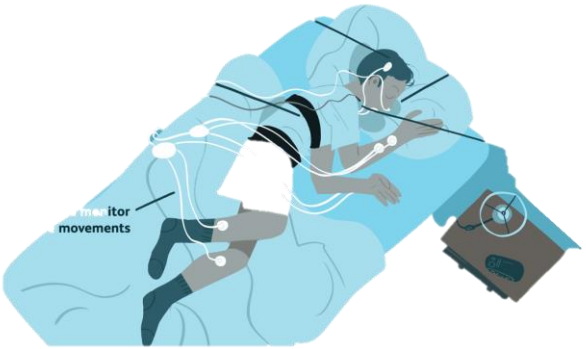
Life (Basel). 2023 Jun 13;13(6):1379. doi: 10.3390/life13061379.



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n:753

n:229

Life (Basel). 2023 Jun 13;13(6):1379. doi: 10.3390/life13061379.

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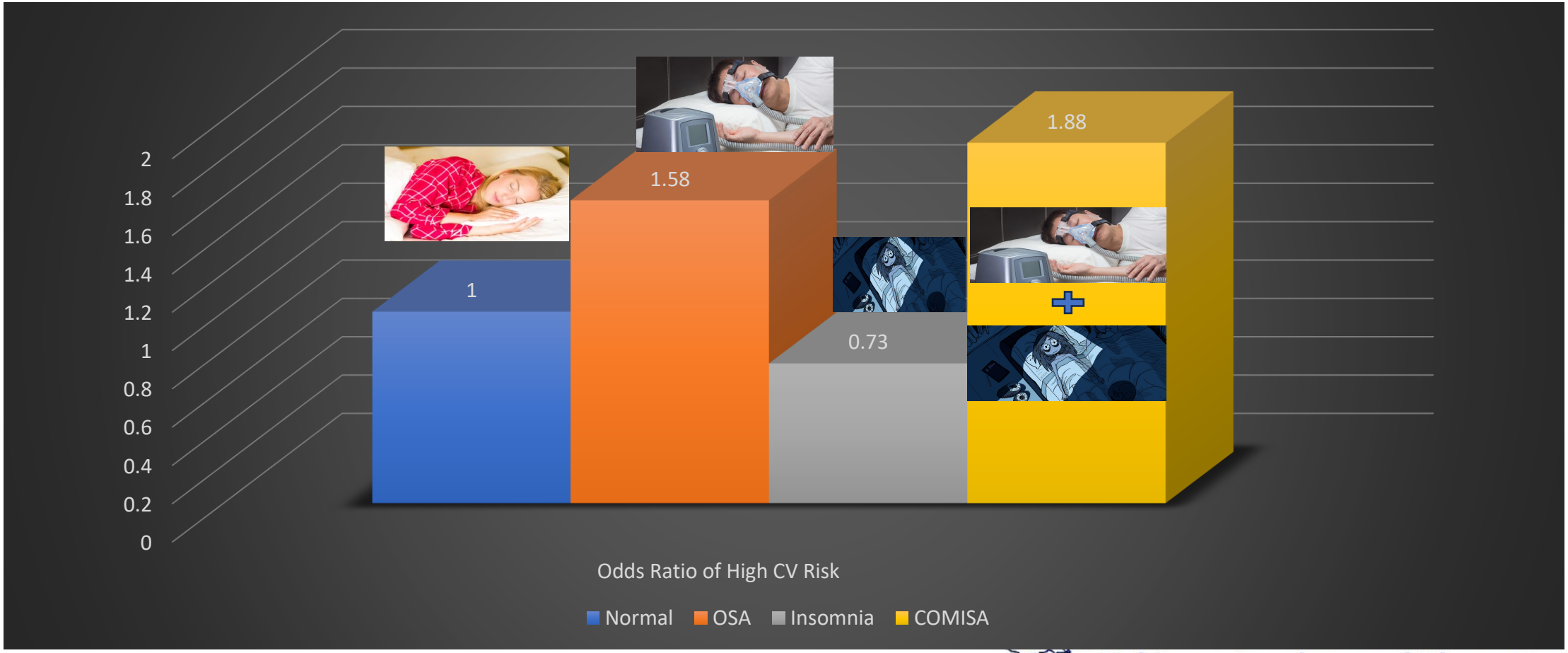
COMISA is associated with high 10-year risk for CVD in hypertensive subjects



Life (Basel). 2023 Jun 13;13(6):1379. doi: 10.3390/life13061379.

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SCIENTIFIC INVESTIGATIONS

Sleep structure in patients with COMISA compared to OSA and insomnia

Bernice M. Wulterkens, MSc-J of Clinical Sleep Med . 2023 Jun 1;19(6):1051-1059

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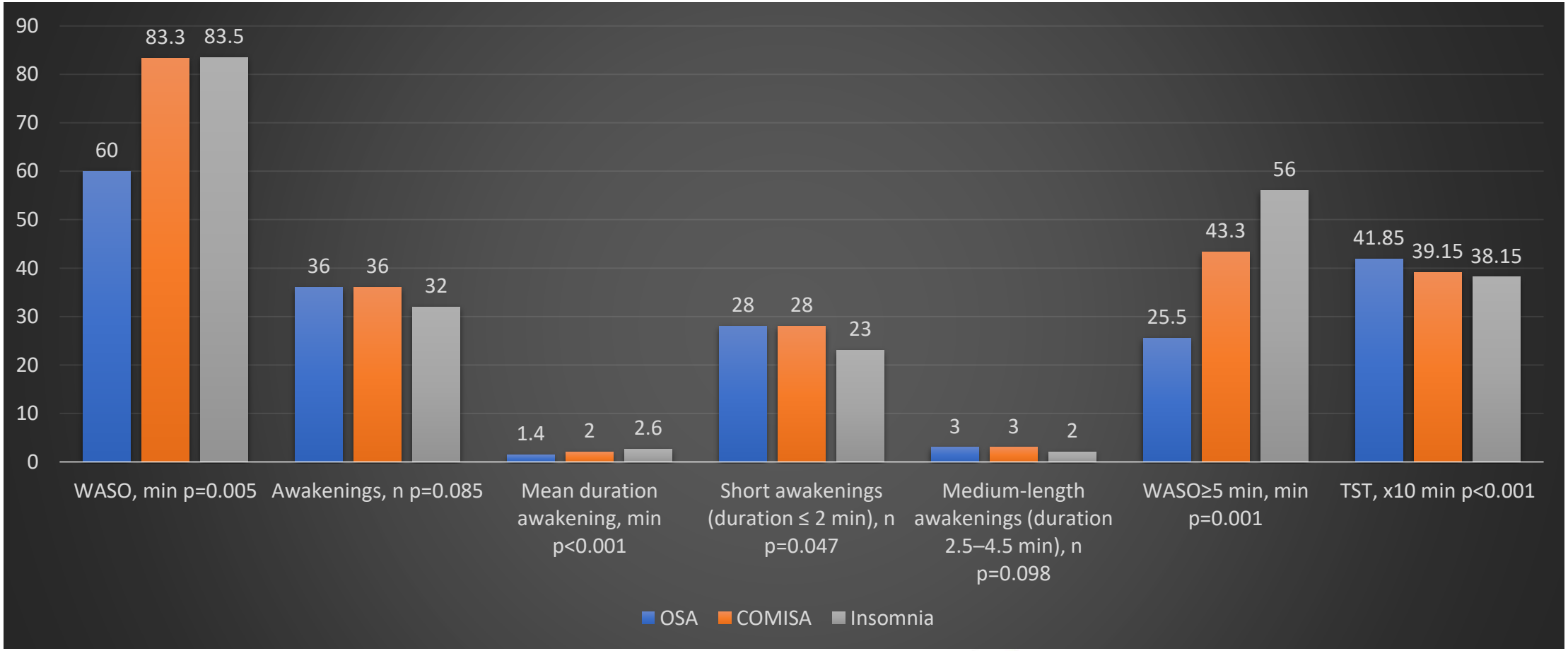
Subjects with COMISA have increased sleep disturbances



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Take home points

- Insomnia and sleep apnea frequently coexist (COMISA).
- COMISA is associated with worse health consequences than either disorder alone.
- Patients with HTN and COMISA had increase risk (1.8) of developing CV complications compared to Insomnia or OSA alone.
- Patients with COMISA may not respond well to CPAP therapy alone.
- COMISA show specific characteristics of insomnia, including prolonged awakenings.

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Restless legs Syndrome

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RLS & Opioids

RESEARCH ARTICLE

Long-term Safety, Dose Stability, and Efficacy of Opioids for Patients With Restless Legs Syndrome in the National RLS Opioid Registry

John Weyl Winkelman, MD, PhD, Benjamin Wipper, BA, and Jordana Zackon, BA
Neurology. 2023 Apr 4; 100(14): e1520–e1528

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RESEARCH ARTICLE

Long-term Safety, Dose Stability, and Efficacy of Opioids for Patients With Restless Legs Syndrome in the National RLS Opioid Registry

Aim

- To examine the characteristics of long-term opioid medication treatment for RLS including
  - Efficacy
  - Changes in opioid dose
  - Risk factors of opioid dose increases

Neurology. 2023 Apr 4; 100(14): e1520-e1528

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Table 1 Baseline Demographics of the 2-Year Study Sample

No. of participants	448
Age (y)	65.0 ± 10.7
Sex	
Female	257 (57.4%)
Race	
White	440 (98.2)
Native American/Alaska Native	4 (0.8%)
Asian	3 (0.6%)
Other	4 (0.8%)
Body mass index (kg/m^2)	27.8 ± 6.4[a]
Highest education level	
Graduate school	203 (45.3%)
College graduate	136 (30.4%)
Partial college	84 (18.8%)
High school or lower	25 (5.6%)
Duration of current opioid	
Less than 6 mo	75 (16.7%)
6 mo–1 y	50 (11.2%)
1–3 y	116 (25.9%)
3–5 y	69 (15.4%)
5–10 y	63 (14.1%)
10+ y	75 (16.7%)
Family history of RLS	271 (60.6%)[b]
History of augmentation	399 (89.9%)

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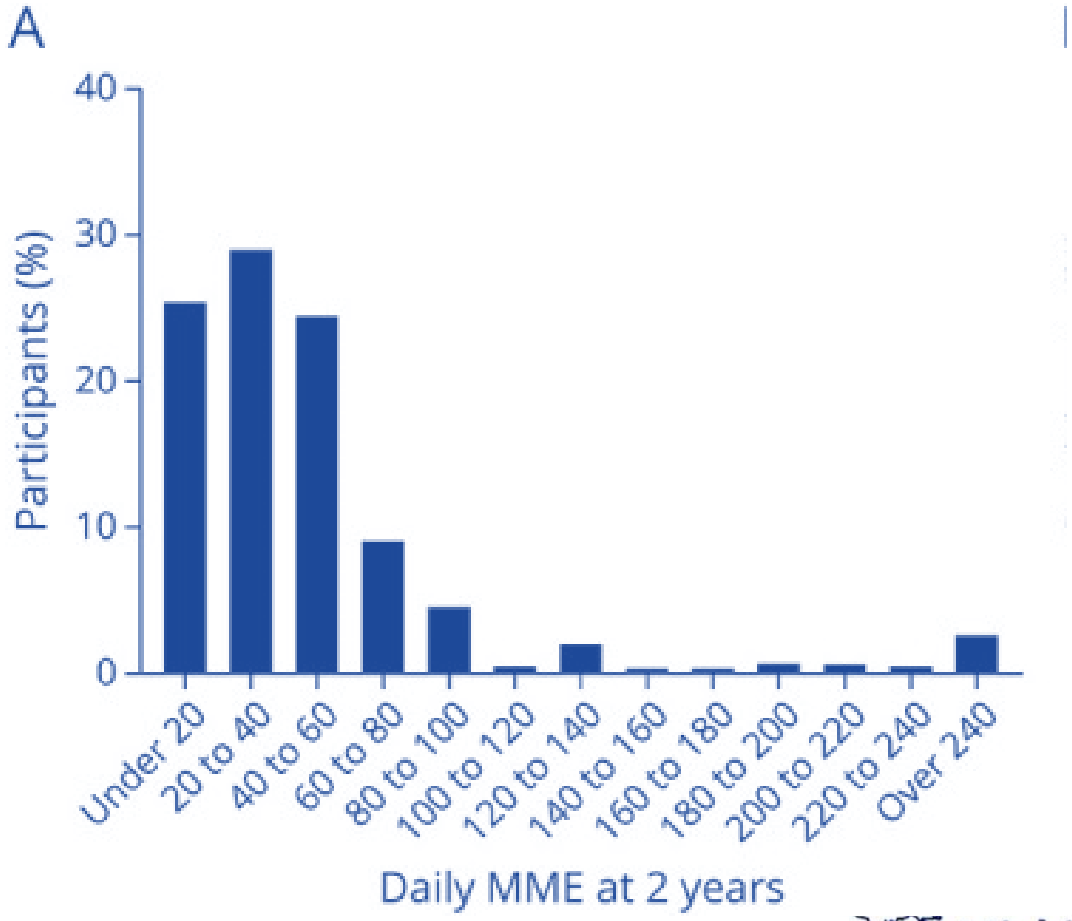
Morphine milligram equivalent (MME) remains relatively low after two years in subjects with RLS



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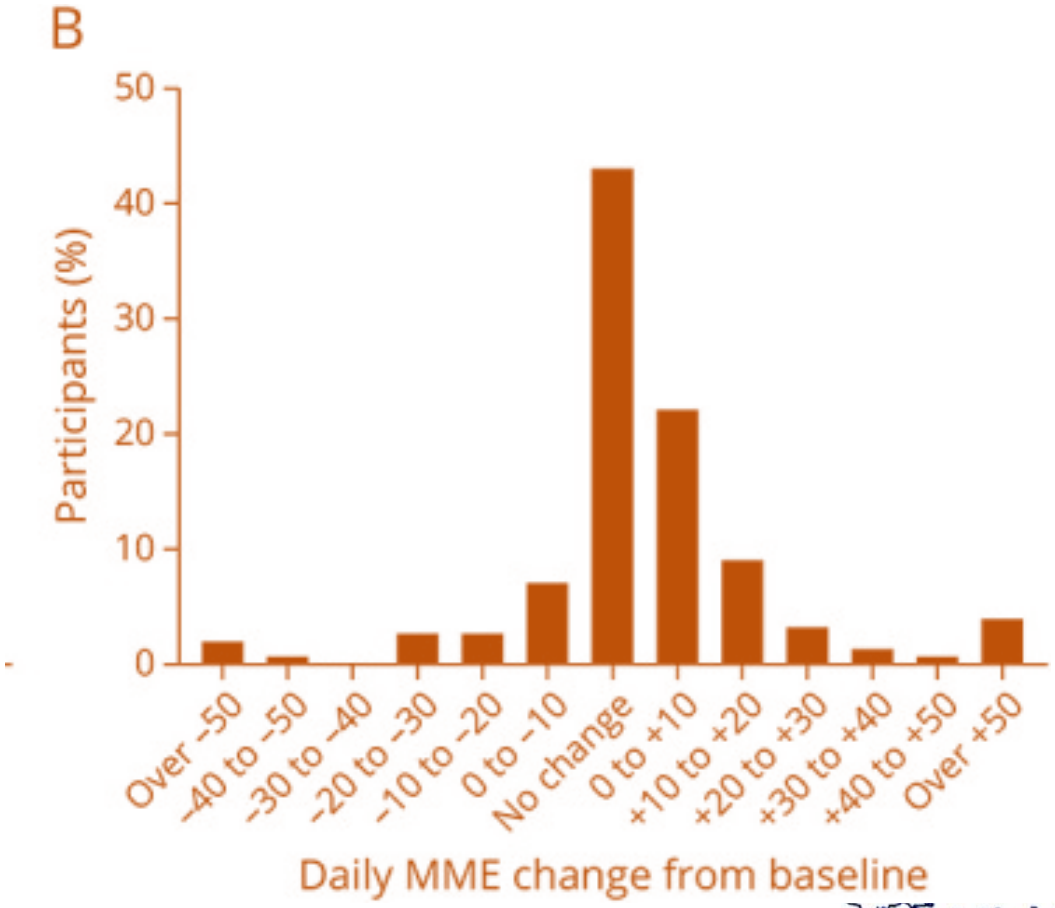
Most subjects with RLS have minimal or no changes in MME dosing after two years



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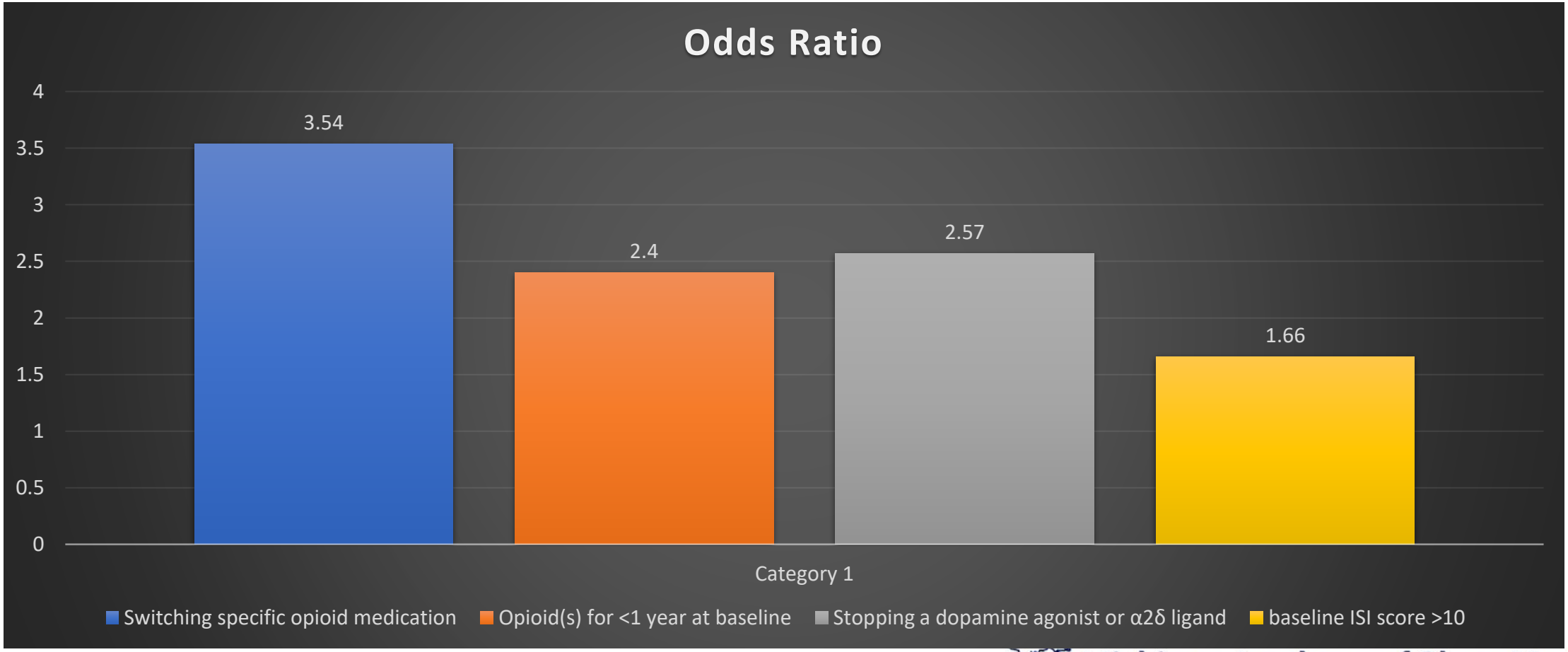
Neurology. 2023 Apr 4; 100(14): e1520–e1528

Four factors were associated with opioid dose increases



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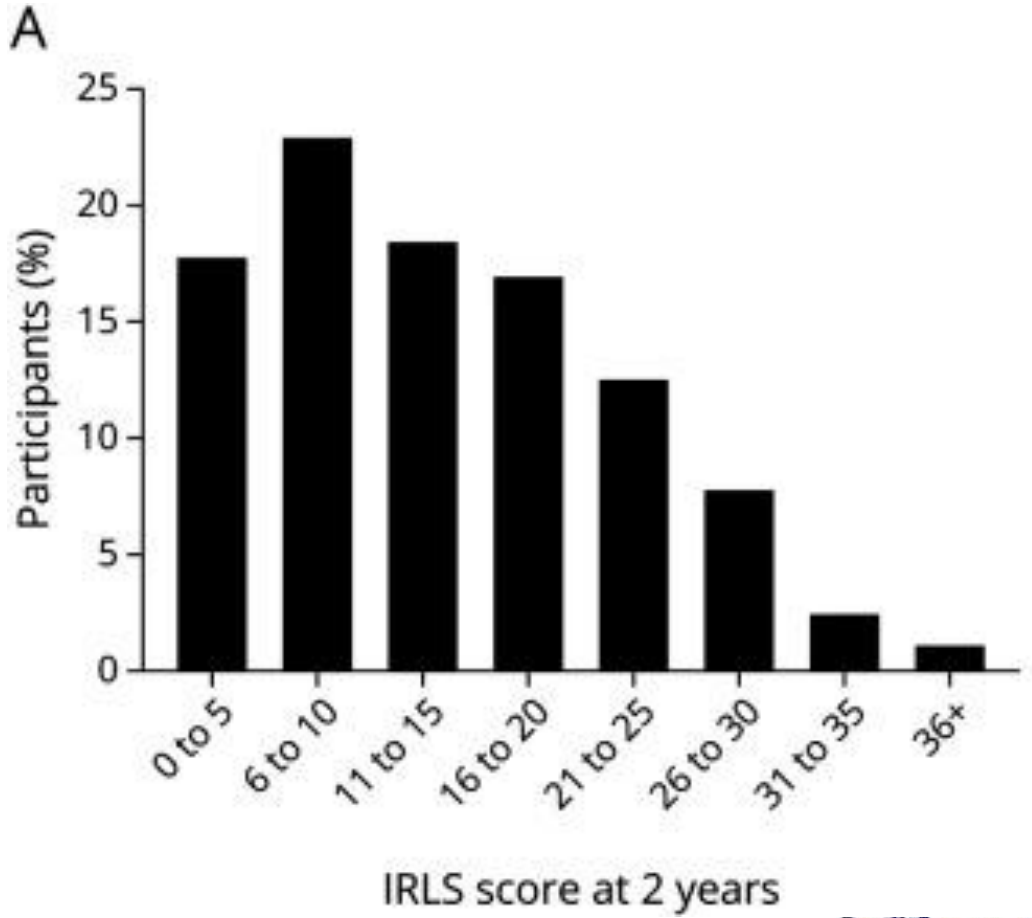
RLS symptom severity remained in the low-to-moderate range after 2 years



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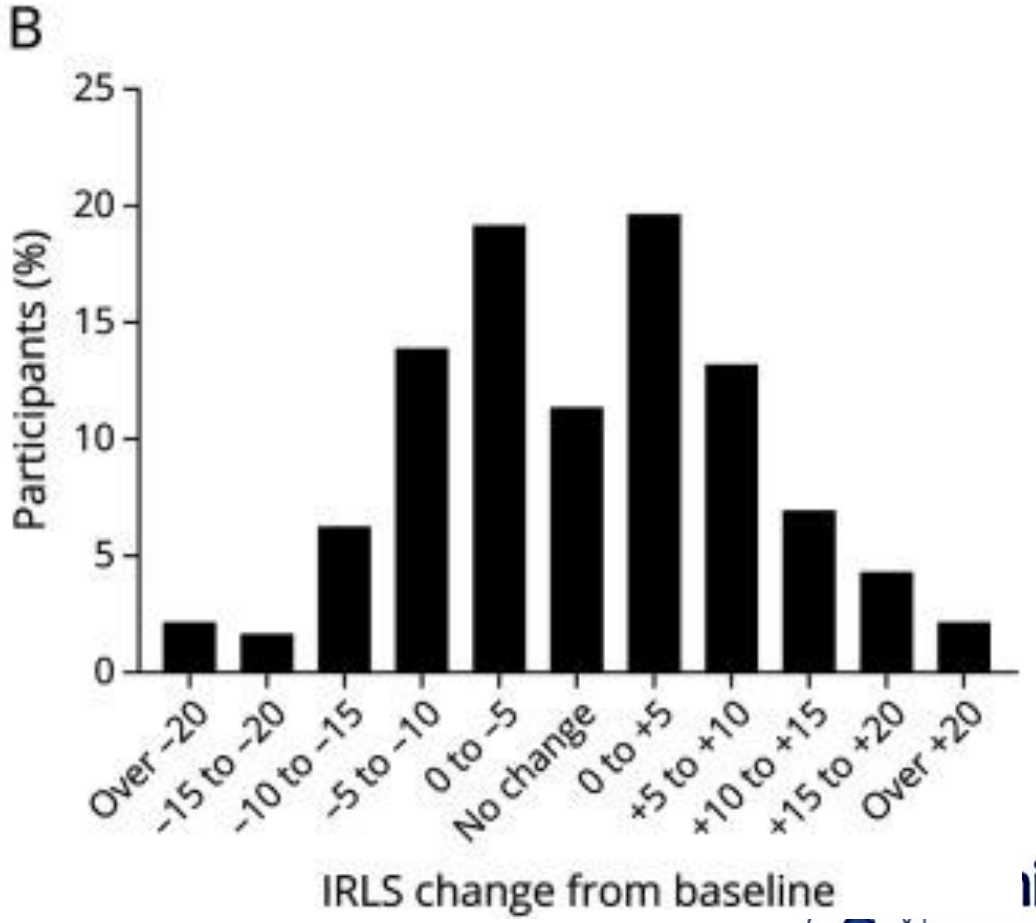
Similar proportion of subjects had increases (45.9%) or decreases (42.8%) in IRLS score during follow-up



Take home points

- Low-dose opioids can control RLS symptoms over time with minimal dose escalation in most patients with refractory, augmented RLS

- Risk factors to increase the opioid dose.
  - Discontinuation of a non-opioid RLS medication
  - Opioid use to also treat a non-RLS comorbid condition.
  - ISI >10 when starting medication
  - Switching from one opioid to another

- Methadone may be particularly effective for controlling RLS symptom

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REM behavior disorder

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https://doi.org/10.5664/jcsm.10424

JCSM | Journal of Clinical Sleep Medicine

SPECIAL ARTICLES

Management of REM sleep behavior disorder: an American Academy of Sleep Medicine clinical practice guideline

RBD treatment guidelines 2023

2010 guidelines:

consensus based on:
case series
small uncontrolled clinical trials
without placebo-controlled studies

Several clinical trials among patients with isolated, secondary to a medical or drug-induced/exacerbated RBD

Conditional recommendations

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SAFETY

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RBD treatment guidelines 2023

Adult patients with isolated RBD

1.The AASM suggests that clinicians use clonazepam, OR use immediate-release melatonin OR pramipexole (vs no treatment) . (CONDITIONAL).

2. The AASM suggests that clinicians use transdermal rivastigmine (vs no treatment) in adults with mild cognitive impairment. (CONDITIONAL)

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RBD treatment guidelines 2023

Adults secondary RBD due to medical condition:

1.The AASM suggests that clinicians use clonazepam, OR use immediate-release melatonin (vs no treatment) . (CONDITIONAL)

2. The AASM suggests that clinicians use transdermal rivastigmine (vs no treatment) in adults(CONDITIONAL)

3. The AASM suggests that clinicians **not** use deep brain stimulation (DBS; vs no treatment) for the treatment of secondary RBD due to medical condition in adults. (CONDITIONAL)

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RBD treatment guidelines 2023

Adult patients with drug-induced RBD

1. The AASM suggests that clinicians use drug discontinuation (vs drug continuation) for the treatment of drug-induced RBD in adults. (CONDITIONAL)

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Dose recommendations:

Rivastigmine:

- Acetylcholinesterase inhibitor .
- Transdermal patch.
- Start 4.6 mg applied 24 h , can be increased to 13.3mg daily.
- Nausea, vomiting. Headache, bradycardia.

RBD treatment guidelines 2023

Prognosis and Counseling

- Establishing expectations with bedpartners, family members and caregivers.
- Discuss the relationship with neurodegenerative diseases if the patient is interested.
- Recognize non- sleep symptoms related to alpha-synuclein
  - Difficulty smelling
  - Slowed bowel motility
  - Orthostasis

STRONG predictor
Phenoconversion
in less 5 years

- Disclosure: ethical dilemma / provider –patient relationship

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Take home points

- Clonazepam, OR use immediate-release melatonin OR pramipexole (RLS) are still first line of treatment.
- Consider transdermal rivastigmine
- **Prognosis and Counseling**

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JAMA | Original Investigation

Adherence to CPAP Treatment and the Risk of Recurrent Cardiovascular Events

A Meta-Analysis

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JAMA | Original Investigation

Adherence to CPAP Treatment and the Risk of Recurrent Cardiovascular Events
A Meta-Analysis

Background

- OSA associated with increased risk of cardiovascular diseases
- CPAP
  - Effective reversing hypoxemia and upper airway obstruction
  - Reverses symptoms associated with OSA (mostly daytime sleepiness)
  - Associated with reduction in blood pressure (resistant hypertension)
- A positive effect has NOT been demonstrated in secondary prevention of cardiovascular events

Ferran Barbé,MD, JAMA October 3, 2023 Volume 330, Number 13

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JAMA | Original Investigation

Adherence to CPAP Treatment and the Risk of Recurrent Cardiovascular Events
A Meta-Analysis

- Objective
  - Assess effect of CPAP for OSA on the risk of adverse cardiovascular events in RCTs

- Methods
  - Systematic review and individual participant data (IPD) meta-analysis

  - Databases: PubMed (MEDLINE), EMBASE, Current Controlled Trials: metaRegister of Controlled Trials, ISRCTN Registry, European Union clinical trials database, CENTRAL (Cochrane Central Register of Controlled Trials), and ClinicalTrials.gov

  - Included studies: RCTs addressing therapeutic effect of CPAP on cardiovascular outcomes and mortality in adults with cardiovascular disease and OSA

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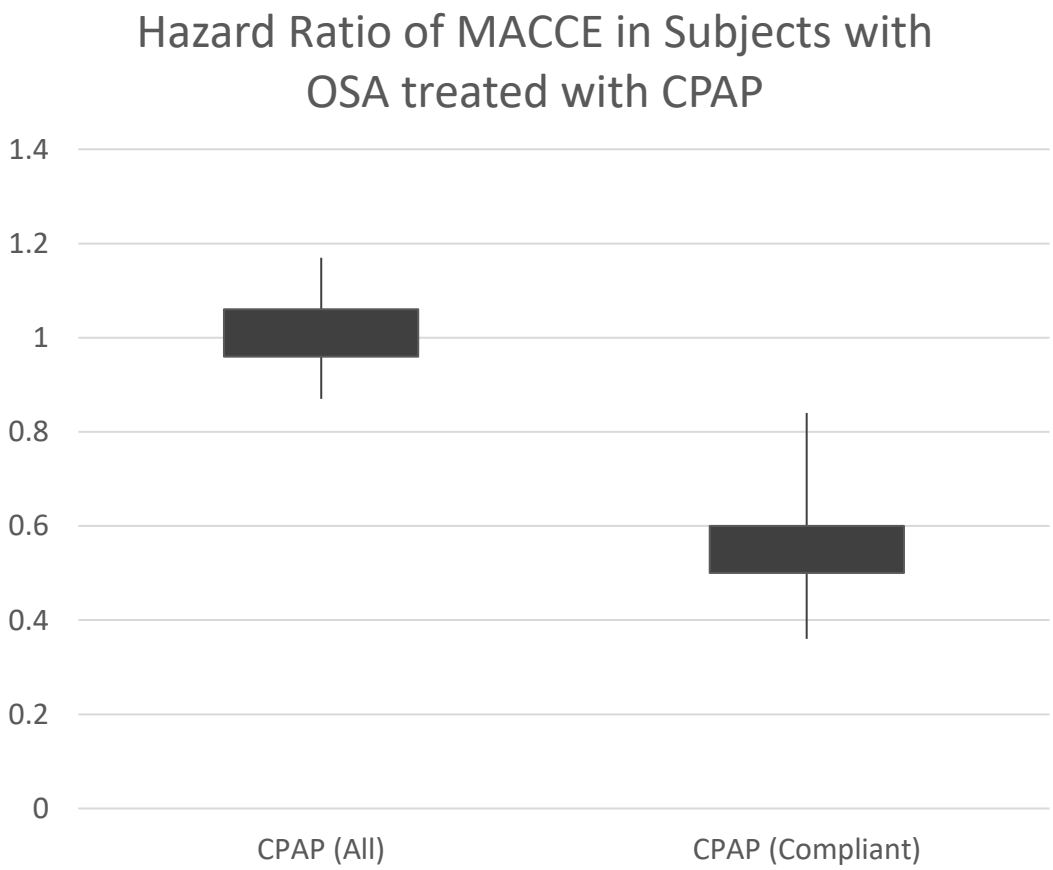
JAMA. 2023 Oct 3;330(13):1255-1265

JAMA | Original Investigation

Adherence to CPAP Treatment and the Risk of Recurrent Cardiovascular Events
A Meta-Analysis

- Results
  - 4186 participants from 3 RCTs
    - 82.1% men
    - BMI: 28.9
    - Age 61.2
    - AHI 31.2/hr
    - HTN in 71%
    - Allocation
      - CPAP 50.1% (adherence, 3.1 hours/day)
      - Usual care 49.9%



JAMA. 2023 Oct 3;330(13):1255-1265

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JAMA | Original Investigation

Adherence to CPAP Treatment and the Risk of Recurrent Cardiovascular Events
A Meta-Analysis

Conclusions

- Adherence to CPAP was associated with a reduced MACCE recurrence risk in subjects with OSA
- Main feature identified as being associated with the no effect of CPAP treatment on secondary cardiovascular prevention is poor adherence to treatment with CPAP

JAMA. 2023 Oct 3;330(13):1255-1265

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Questions…

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