

In partnership with



# The Sleep-Psych Nexus: *Understanding and Assessing Sleep Disturbances* in Psychiatric Practice

## MasterClass

Supported by educational grants from Alkermes, Inc, Axsome Therapeutics, Inc., and Harmony Biosciences.

# Faculty

## **Craig Chepke, MD, DFAPA**

Adjunct Associate Professor of  
Psychiatry, Atrium Health

Medical Director, Excel  
Psychiatric Associates

Chief Medical Officer, Psych  
Congress

Huntersville, NC

## **Logan Schneider, MD**

Co-Director, Stanford Sleep  
Center, Stanford University

Redwood, CA

## **Philip Gehrman, PhD, CBSM, FAASM**

Professor of Psychology,  
University of Pennsylvania School  
of Medicine

Philadelphia, PA

# Faculty Disclosures

- **Craig Chepke, MD, DFAPA:** Advisory Board — AbbVie, Acadia, Alkermes PLC, Axsome Therapeutics, Biogen, Bristol Myers Squibb, COMPASS Pathways, Corium, Eli Lilly, Idorsia, Intracellular Therapeutics, Jazz, Johnson & Johnson, Lundbeck, Moderna, Neurocrine, Otsuka, Sage, Sumitomo, Takeda, Teva; Consultant — AbbVie, Acadia, Alkermes PLC, Axsome Therapeutics, Biogen, Boehringer Ingelheim, Bristol Myers Squibb, Cingulate Therapeutics, Corium, Eli Lilly, Intracellular Therapeutics, Jazz, Johnson & Johnson, Lundbeck, MedinCell, Moderna, Neurocrine, Otsuka, Sage, Sumitomo, Supernus, Teva; Grant/Research Support — Acadia, Axsome Therapeutics, Harmony, Neurocrine, Teva; Speakers Bureau — AbbVie, Acadia, Alkermes PLC, Axsome Therapeutics, Bristol Myers Squibb, Corium, Intracellular Therapeutics, Jazz, Johnson & Johnson, Lundbeck, Luye, Merck, Neurocrine, Otsuka, Sumitomo, Takeda, Teva
- **Philip Gehrman, PhD, CBSM, FAASM:** Consultant — Vanda Pharmaceuticals; Grant/Research Support — Jazz Pharmaceuticals, Merck & Co., Inc. (Terminated)
- **Logan Schneider, MD:** Advisory Board - Avadel/Alkermes, Axsome, Centess (Lilly), Jazz, Takeda; Speaker's Bureau - Avadel/Alkermes, Axsome, Jazz; Employee/Owner - Alphabet, Inc

# Disclosures

- The faculty have been informed of their responsibility to disclose to the audience if they will be discussing off-label or investigational use(s) of drugs, products, and/or devices (any use not approved by the US Food and Drug Administration).
- Applicable CME staff have no relationships to disclose relating to the subject matter of this activity.
- This activity has been independently reviewed for balance.

# Learning Objectives



Summarize the shared neurobiological mechanisms underlying sleep-wake regulation and psychiatric disorders, and the bidirectional clinical consequences of their dysregulation



Evaluate evidence-based screening strategies and diagnostic tools to improve recognition and differentiation of insomnia, hypersomnia, and related sleep-wake disorders in psychiatric populations



Assess patient-centered, mechanism-informed treatment plans that account for reciprocal effects of psychiatric and sleep-directed therapies and incorporate cross-disciplinary collaboration when appropriate



Analyze clinical scenarios involving comorbid psychiatric illness and sleep-wake disorders to identify common diagnostic pitfalls, optimize referral decisions, and improve longitudinal functional outcomes comorbid SWDs and psychiatric disorders

# Clinical Significance of Sleep in Psychiatric Practice

# Sleep Is the Foundation of Mental Health



...and without a good foundation,  
**your whole house will crumble**

Sleep disorders are often accompanied by **changes in mood, anxiety, and cognition** that must be addressed in treatment planning and management.

Furthermore, persistent sleep disturbances (both insomnia and excessive sleepiness) are established **risk factors** for the subsequent development of mental illnesses and substance use disorders.

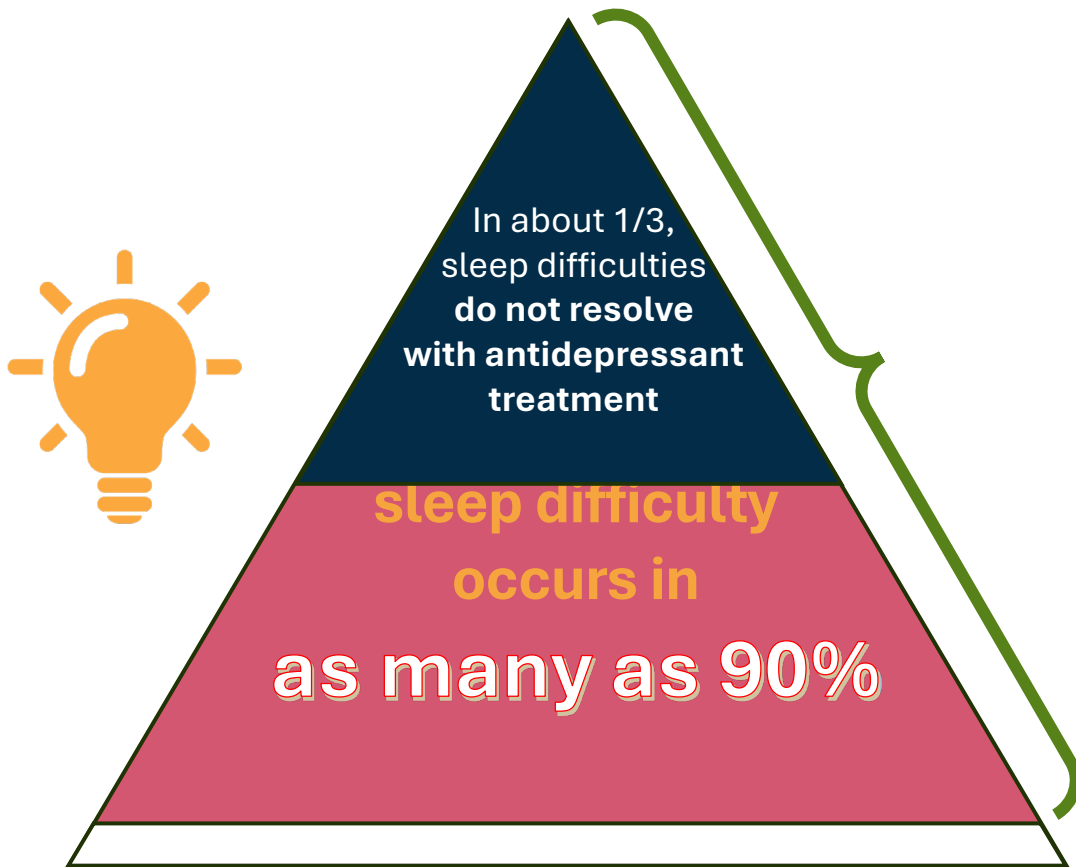
They may also represent a **prodromal expression** of an episode of mental illness, allowing the possibility of early intervention to preempt or attenuate a full-blown episode.

# Sleep Disturbances Are Highly Prevalent and Part of the Diagnostic Criteria for Most Psychiatric Conditions

|                                                 |                                                                                                                                  |               |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Generalized Anxiety Disorder</b>             | <i>“Sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)”</i>                                | <b>60-70%</b> |
| <b>Bipolar Disorder</b>                         | <i>“Decreased need for sleep (e.g., feels rested after only 3 hours of sleep)”</i>                                               | <b>70%</b>    |
| <b>Schizophrenia</b>                            | <i>“Individuals with schizophrenia may display... a disturbed sleep pattern (e.g., daytime sleeping and nighttime activity)”</i> | <b>70%</b>    |
| <b>Attention-Deficit/Hyperactivity Disorder</b> | <i>“Many individuals with ADHD report daytime sleepiness”</i>                                                                    | <b>80%</b>    |
| <b>Major Depressive Disorder</b>                | <i>“Fatigue or loss of energy nearly every day”</i>                                                                              | <b>90%</b>    |
| <b>Post-Traumatic Stress Disorder</b>           | <i>“Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep)”</i>                                        | <b>90%</b>    |

# Prevalence and Consequences of Sleep Disturbances...

## In Major Depressive Disorder



Those with **poor sleep** have:



**Lower remission rates**



**Faster relapse**



**Slower improvement**



**Poorer quality of life**

*Independent of depression severity*

At least **32 studies** (as of 2012) have identified that sleep disturbance is **significantly linked to suicidal ideation or completed suicide**, even when controlling for age, gender, diagnosis, and severity of depressive symptoms.

# Prevalence and Consequences of Sleep Disturbances...

## In Bipolar Disorder

In a study of N=20 individuals with bipolar disorder who were **euthymic**, **70% exhibited a clinically significant sleep disturbance**

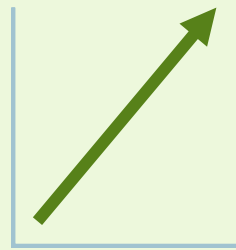
## In Schizophrenia

Most people with schizophrenia experience **significant sleep problems**

(estimated prevalence of insomnia [~80%], nightmare disorder [~48%], & circadian rhythm disruptions [~40%])

## In Post-Traumatic Stress Disorder

**More sleep symptomology** is associated with **greater PTSD symptom severity**

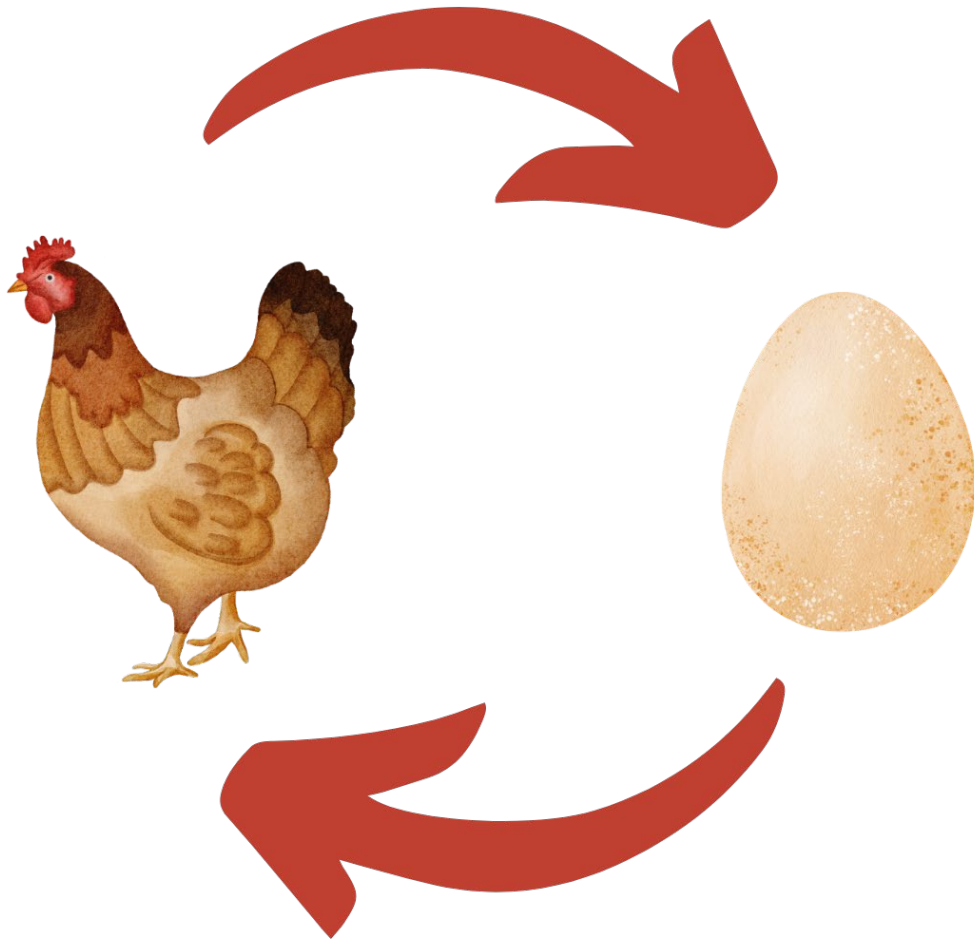


## In Generalized Anxiety Disorder

Up to **90%** of individuals with GAD report **insomnia symptoms**

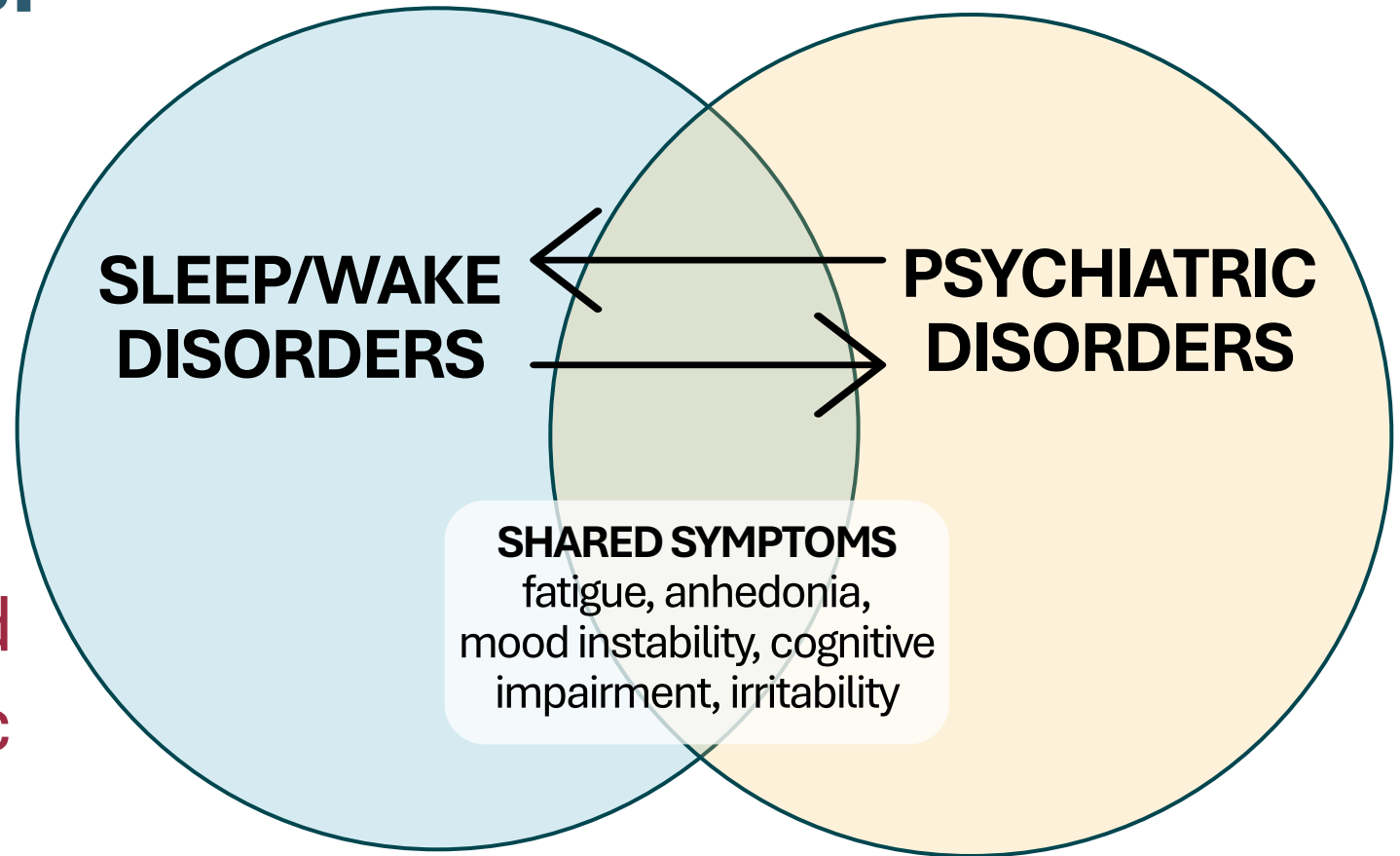
About **60–70%** of patients with GAD and panic disorder reported prominent sleep disturbances

# Do Psychiatric Conditions Cause Sleep Disorders? ...or Do Sleep Disorders Cause Psychiatric Conditions?



Sleep disturbances are both a **risk factor** and a **symptom** of psychiatric disorders

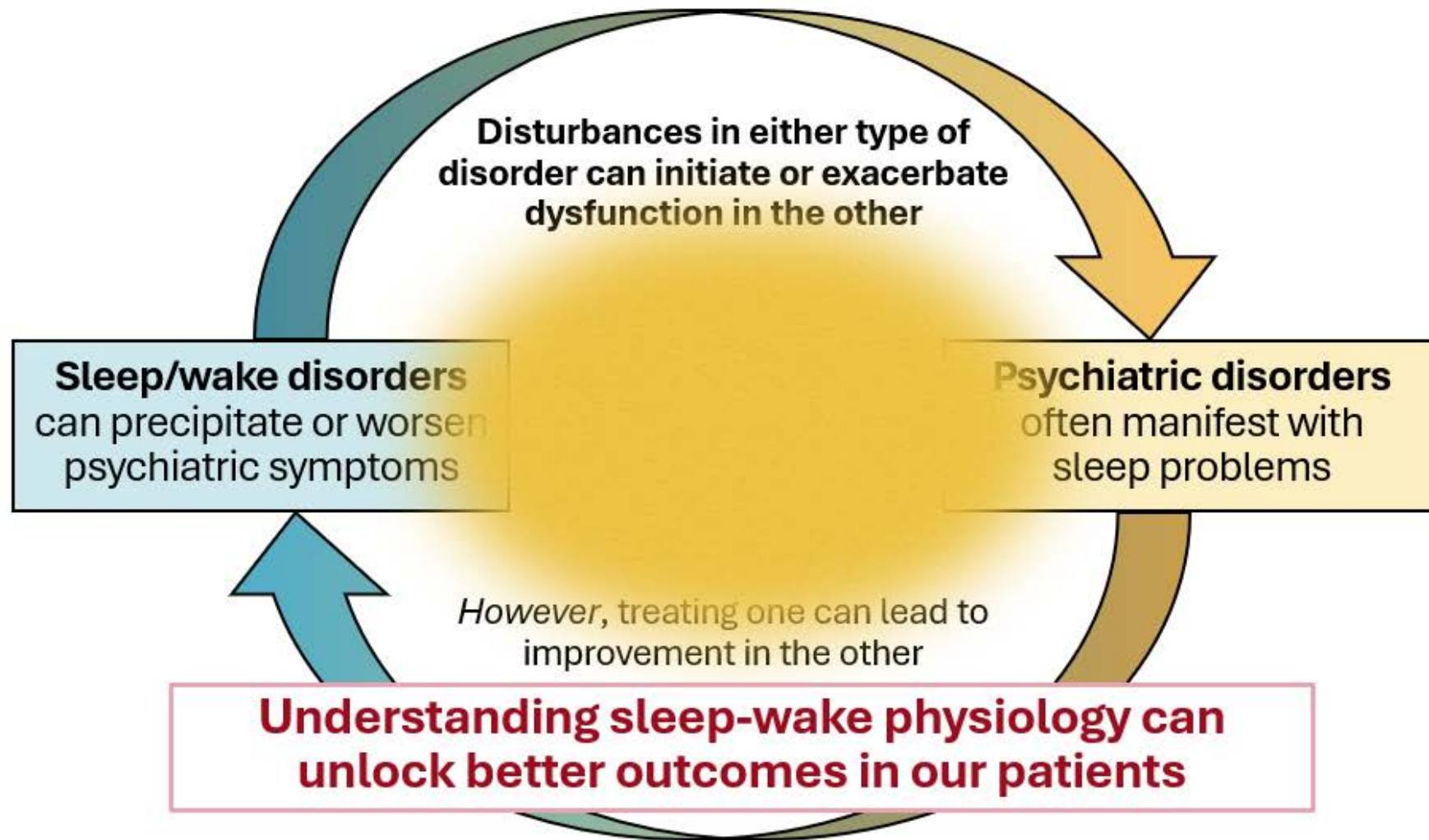
# Also, Each May Exacerbate the Other



...and can be worsened  
by common psychiatric  
medications



# Sleep/Wake and Psychiatric Disorders Are Bidirectional



# Key Learning Points



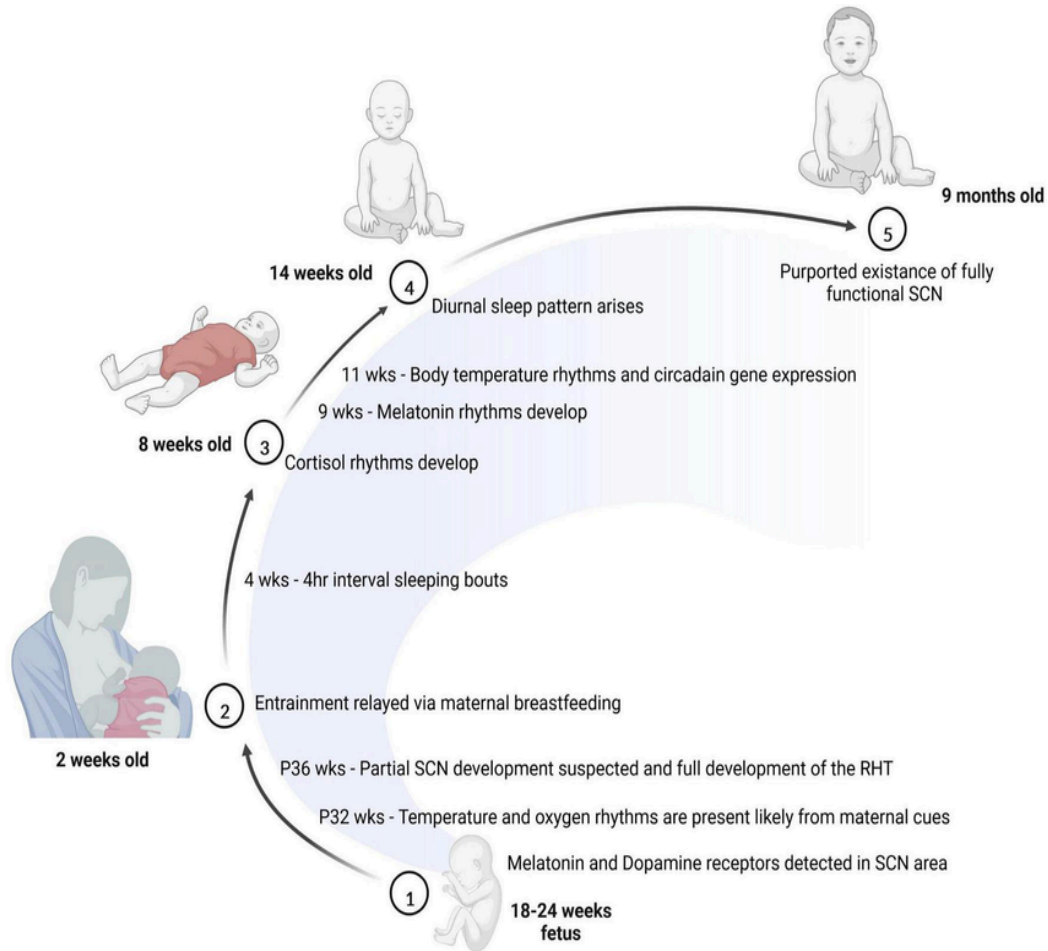
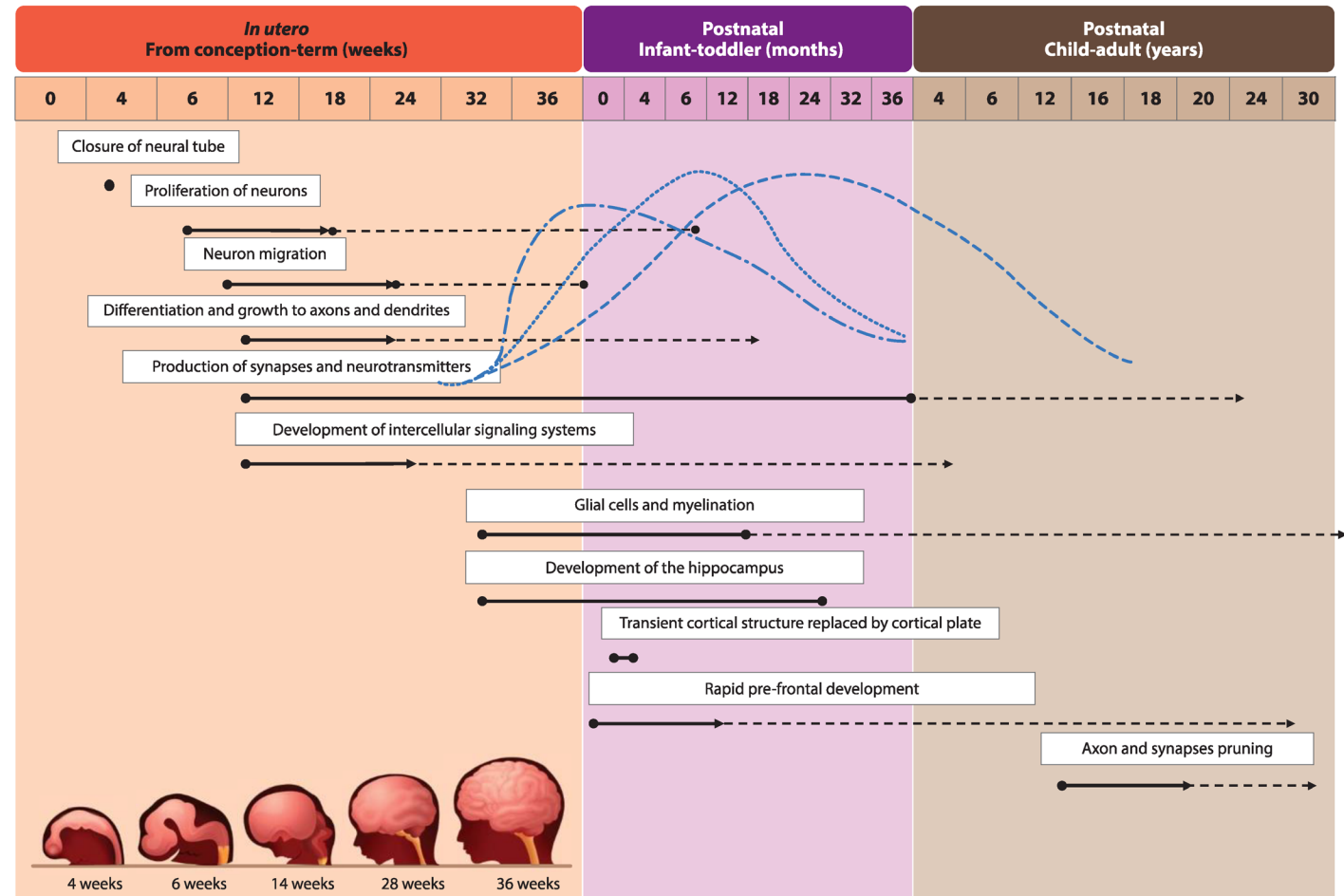
- There is a bidirectional relationship between sleep-wake disorders and psychiatric disorders, so sleep symptoms can give us a glimpse into an individual's psychiatric status
- Sleep/wake disorders and psychiatric disorders are often **not mutually exclusive**, as they frequently co-occur and share overlapping symptoms that can exacerbate each other
  - Example: Sleep disturbances occur in approximately **90% of patients with MDD** and are significantly linked to suicidal ideation and completed suicide
- SWDs and psychiatric disorders may also be worsened by medications
  - Example: SSRIs are associated with insomnia at a rate of **3x greater than placebo**
- Sleep disturbances negatively impact an individual's mental health in various ways, regardless of their diagnosis

# **Normal Sleep and Wakefulness: Neurobiology Across the Lifespan**

# You Have to Crawl Before You Can Walk



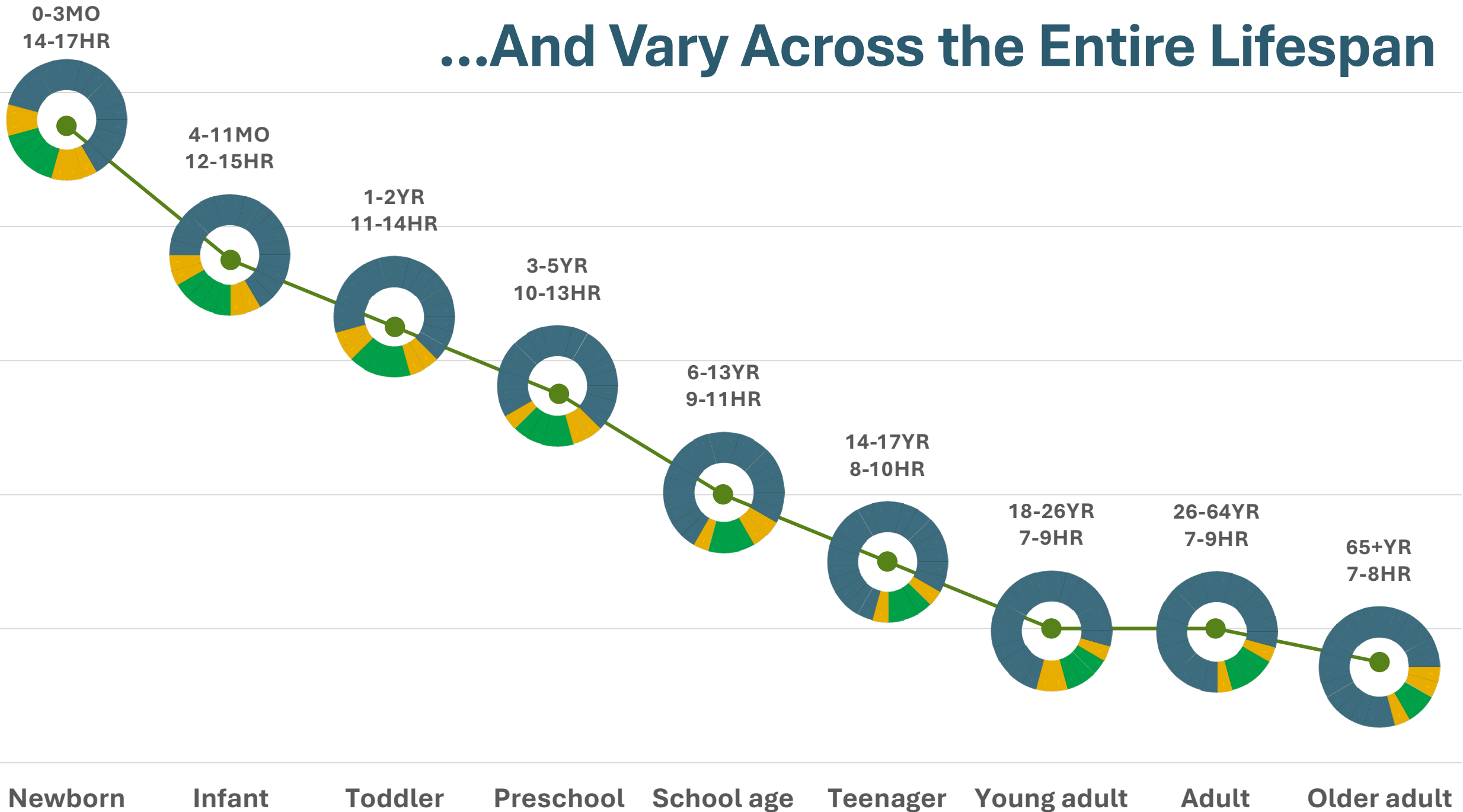
# Sleep Needs Vary Across Development



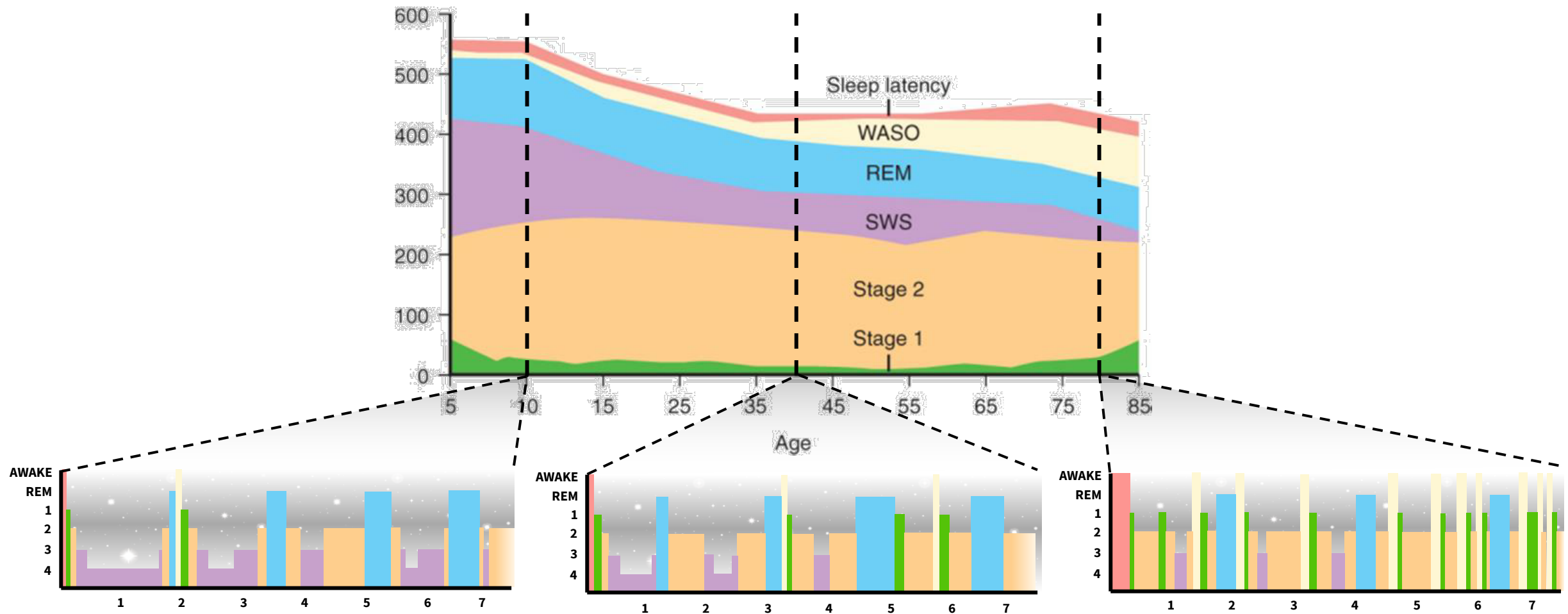
Depicts approximate timelines for experience-dependent synaptic development:

- - - - - Visual and auditory cortex (seeing/hearing);  
 - - - - - Angular gyrus/Broca's area (language and speech);  
 - - - - - Prefrontal cortex (higher cognitive functions)  
 ● ————— Rapid development    - - - - - Prolonged development

# ...And Vary Across the Entire Lifespan

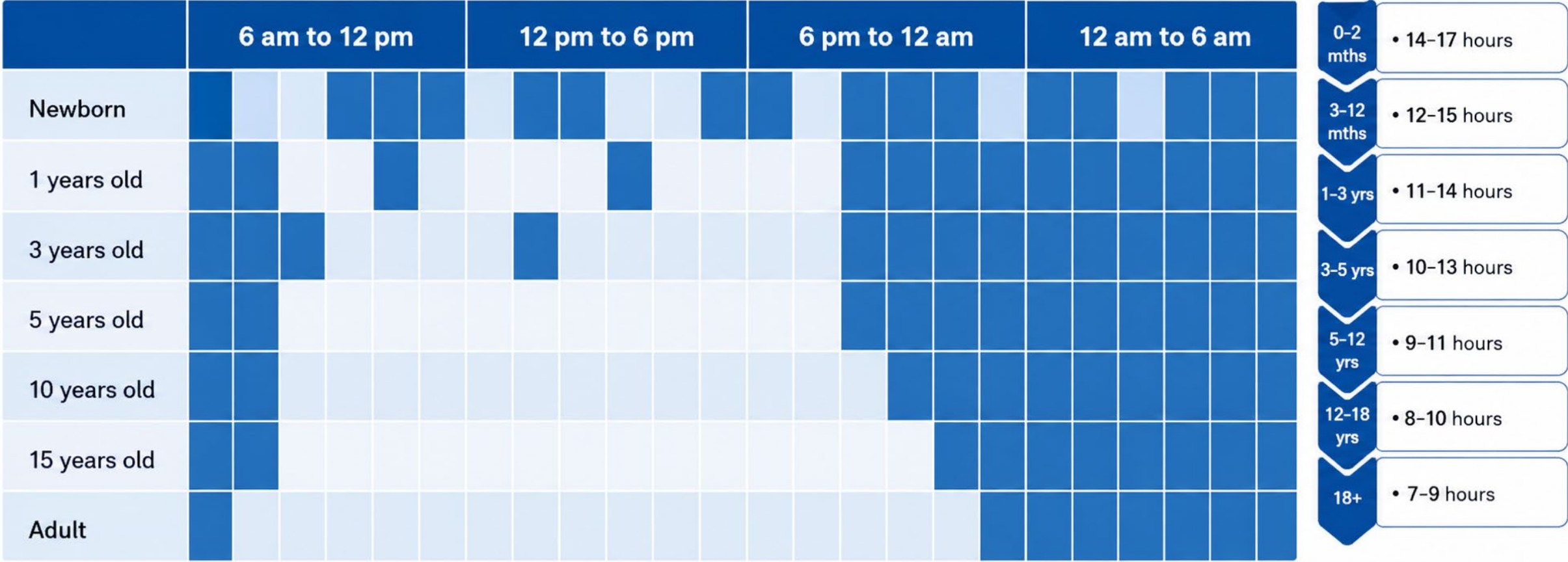


# Sleep Is An Evolving Process

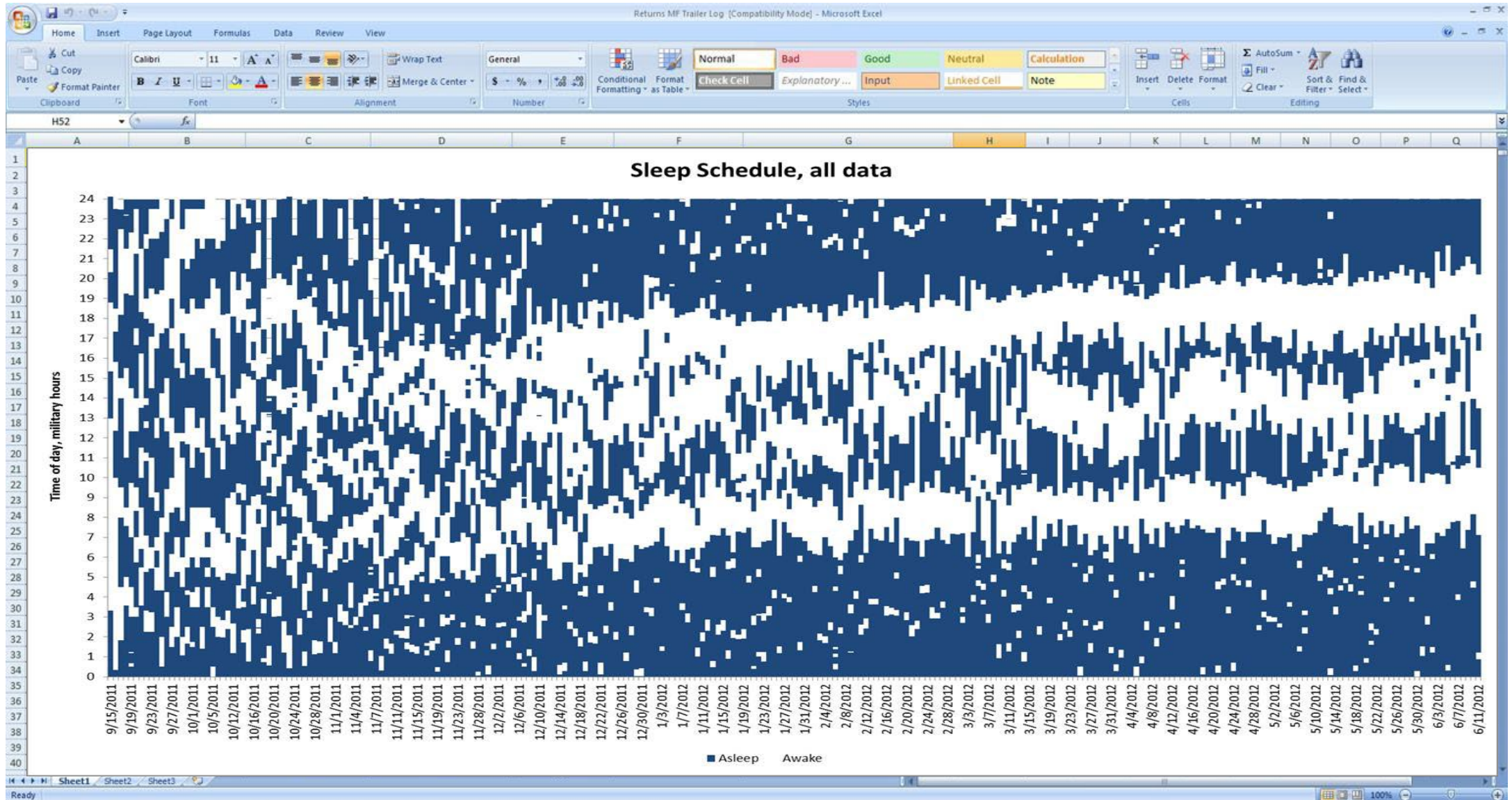


Hirshkowitz M. Normal human sleep: an overview. *Med Clin North Am.* 2004;88(3):551-vii.

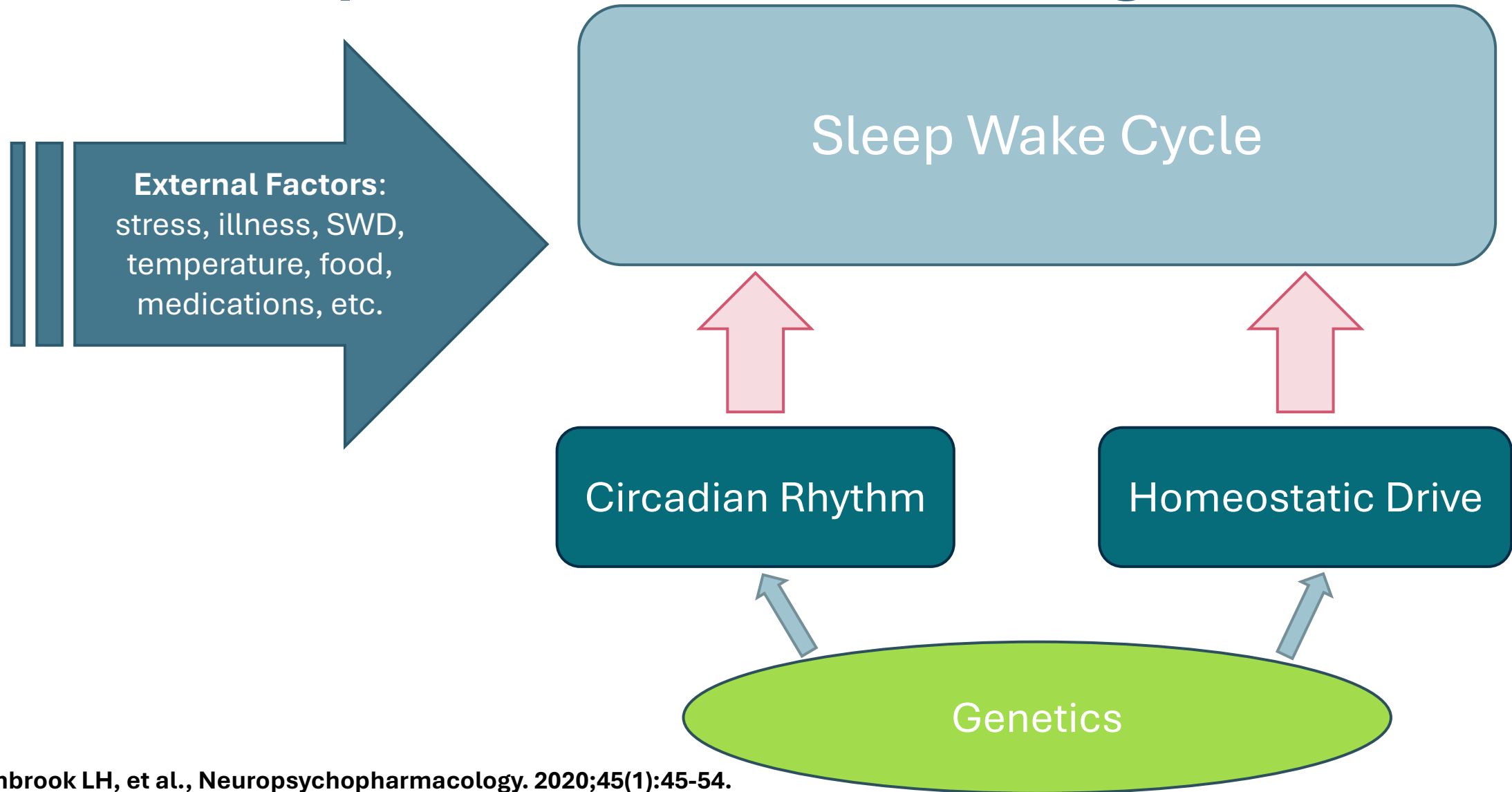
# Developmental Sleep Wake Patterns



# Developmental Sleep Wake Patterns

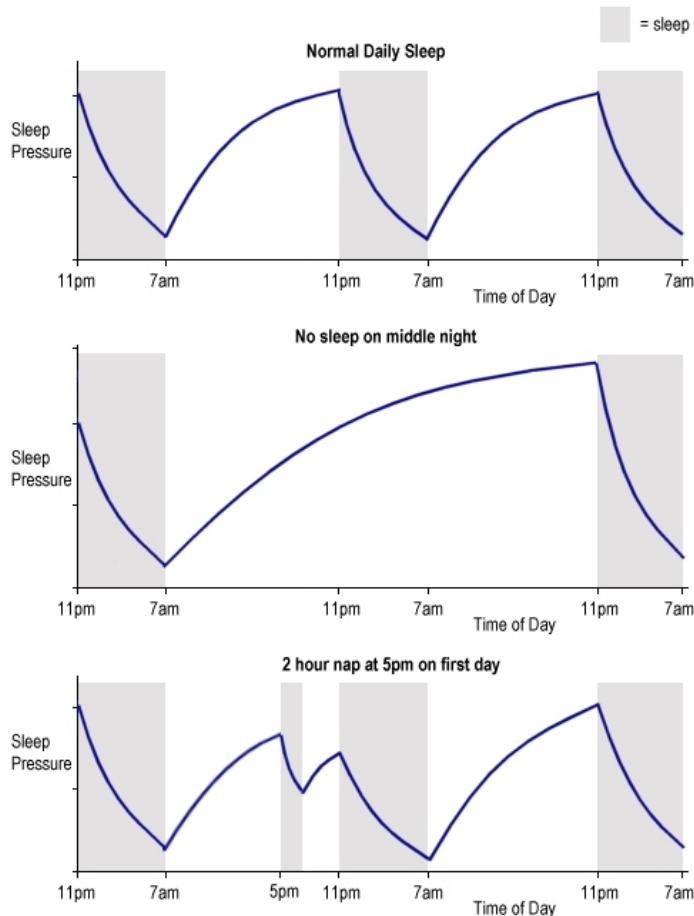


# Sleep Wake and Circadian Regulation

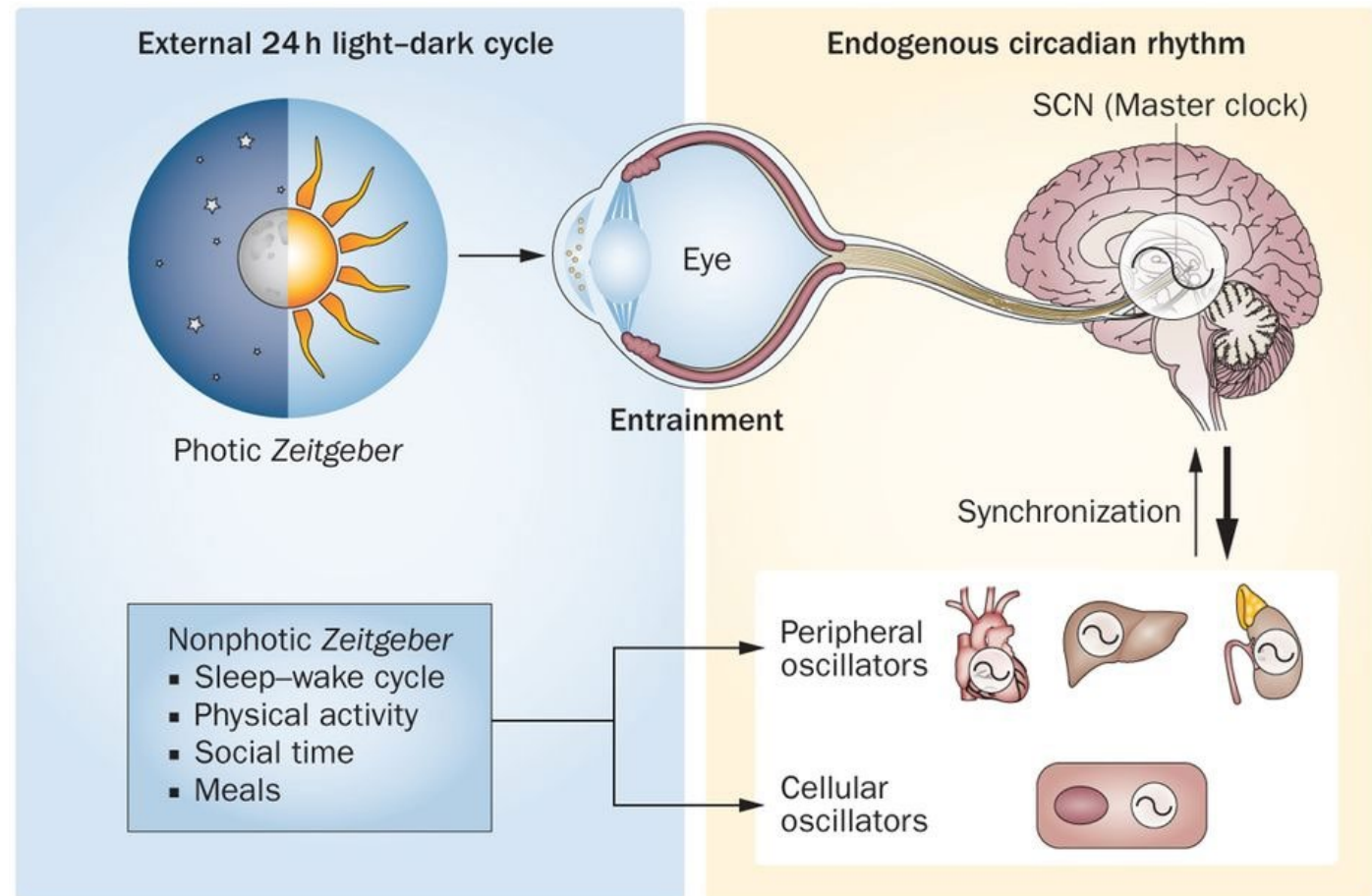


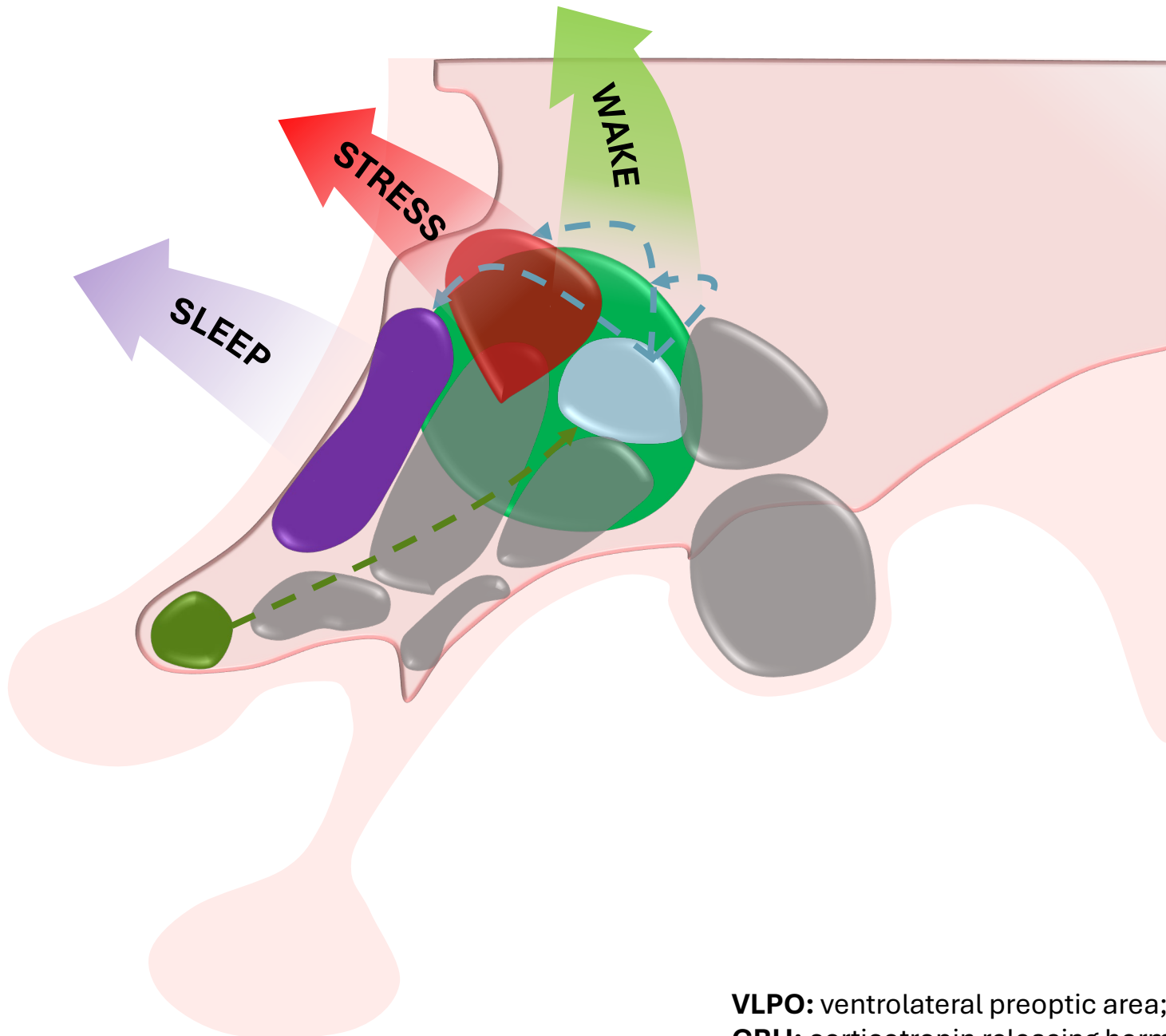
# More on the 2 processes

## Homeostatic



## Circadian





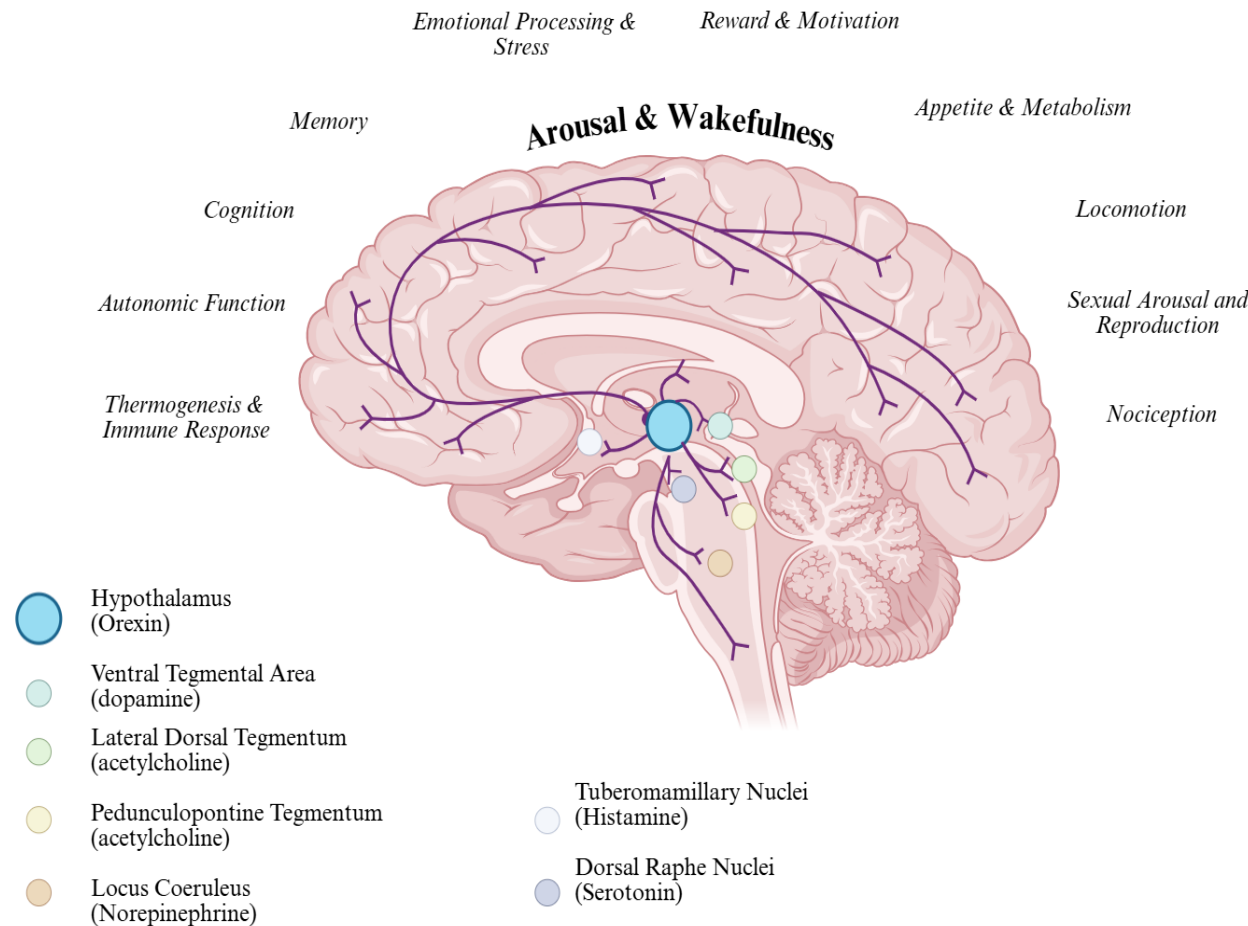
**Suprachiasmatic nucleus (SCN)**  
transmits photic zeitgeber signals  
via subparaventricular zone  
(sPVZ)

**Dorsomedial nucleus (DMN)**  
integrates psychophysiologic  
signals to entrain rhythms:

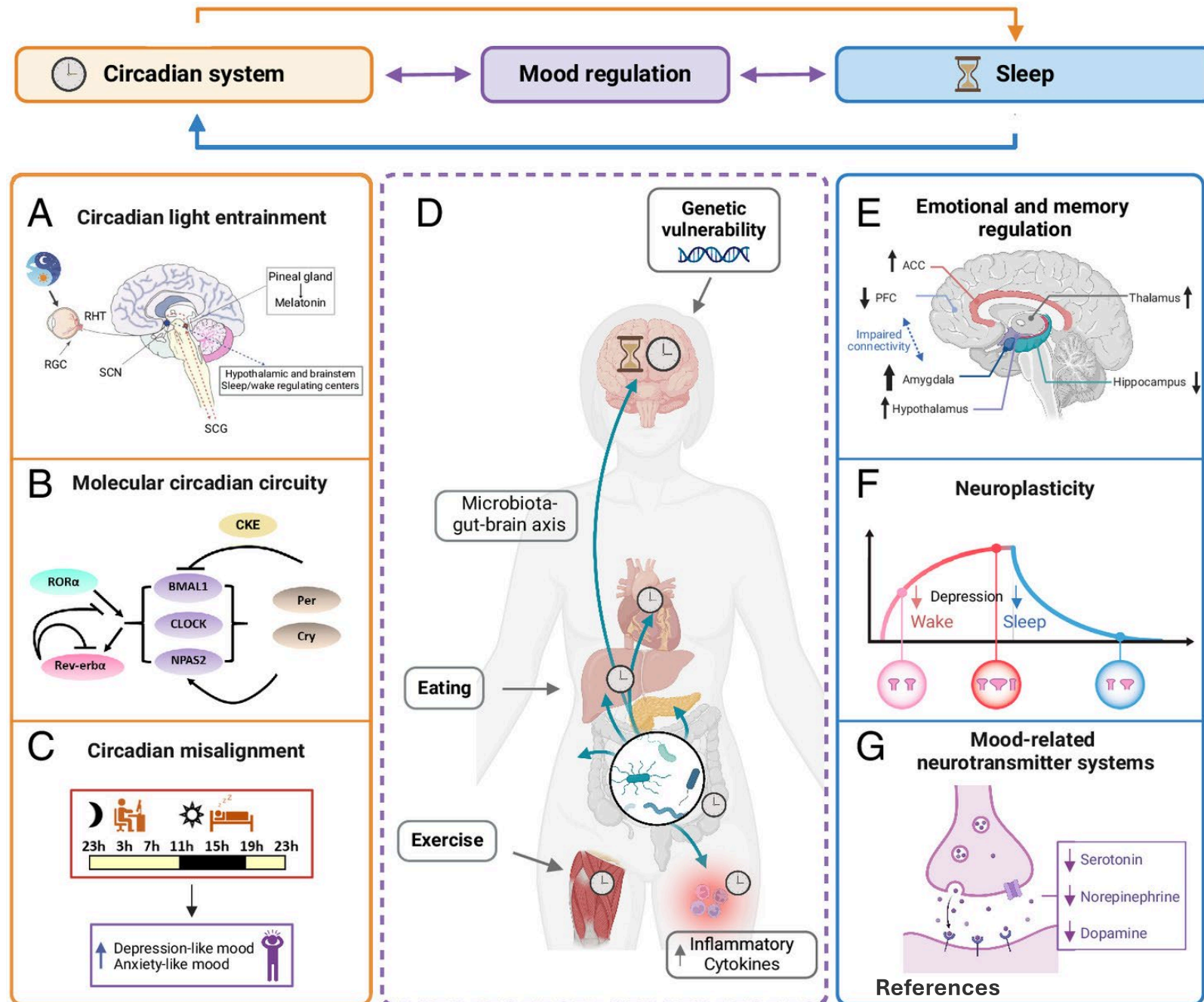
- **Sleep (VLPO: GABA)**
- **Biological (PVN: CRH)**
- **Wake (LHA: orexin)**

**VLPO:** ventrolateral preoptic area; **GABA:**  $\gamma$ -aminobutyric acid; **PVN:** paraventricular nucleus;  
**CRH:** corticotropin releasing hormone; **LHA:** lateral hypothalamic area

# The Orexin System: An Integrator of Sleep, Circadian, and Overall Health and Wellness



# Tying it all together



# Key Learning Points

- Sleep and circadian health are key factors in mental health, necessitating a 24-hour approach in management considerations
- The natural ontogeny of sleep provides insight into evolving brain development and brain health
- The orexin system serves as an essential integrator of sleep, circadian, and overall health and wellness, including mental health

# **Disorders of Sleep and Wakefulness in Psychiatric Practice**

# Sleep-Wake Disorders in DSM-5-TR

## DSM-5 Sleep-Wake-Circadian Disorders/Groups

Insomnia Disorder

Hypersomnolence Disorder

Narcolepsy

Breathing-Related Sleep Disorder (eg, OSA)

Circadian Rhythm Sleep-Wake Disorders

Non-REM Sleep Arousal Disorders

Nightmare Disorder

REM Sleep Behavior Disorder

} Parasomnias

Restless Legs Syndrome

Substance/Medication-Induced Sleep Disorder

Complaints are of dissatisfaction regarding the quality, timing, and amount of sleep.

However, resulting **daytime distress and impairment** are core features shared by all sleep-wake disorders.

Sleep disorders are often accompanied by **depression, anxiety, and cognitive changes** that must be addressed in treatment planning and management.

Furthermore, persistent sleep disturbances (both insomnia and excessive sleepiness) are established **risk factors** for the subsequent development of mental illnesses and substance use disorders.

They may also represent a **prodromal expression** of an episode of mental illness, allowing the possibility of early intervention to preempt or attenuate a full-blown episode.

OSA=obstructive sleep apnea; REM=rapid eye movement.

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition-Text Revision. American Psychiatric Association Publishing; 2023.

# Sleep-Wake Disorders in DSM-5-TR

- **Insomnia Disorder**

- Difficulty initiating or maintaining sleep or early morning awakenings
- Clinically significant distress or impairment
- At least 3 nights/week for at least 3 months
- Despite adequate opportunity for sleep
- Not better explained by other factors

**Always assess ‘adequate opportunity for sleep’**

*Shift work, parenting, late-night screen use ≠ insomnia disorder*

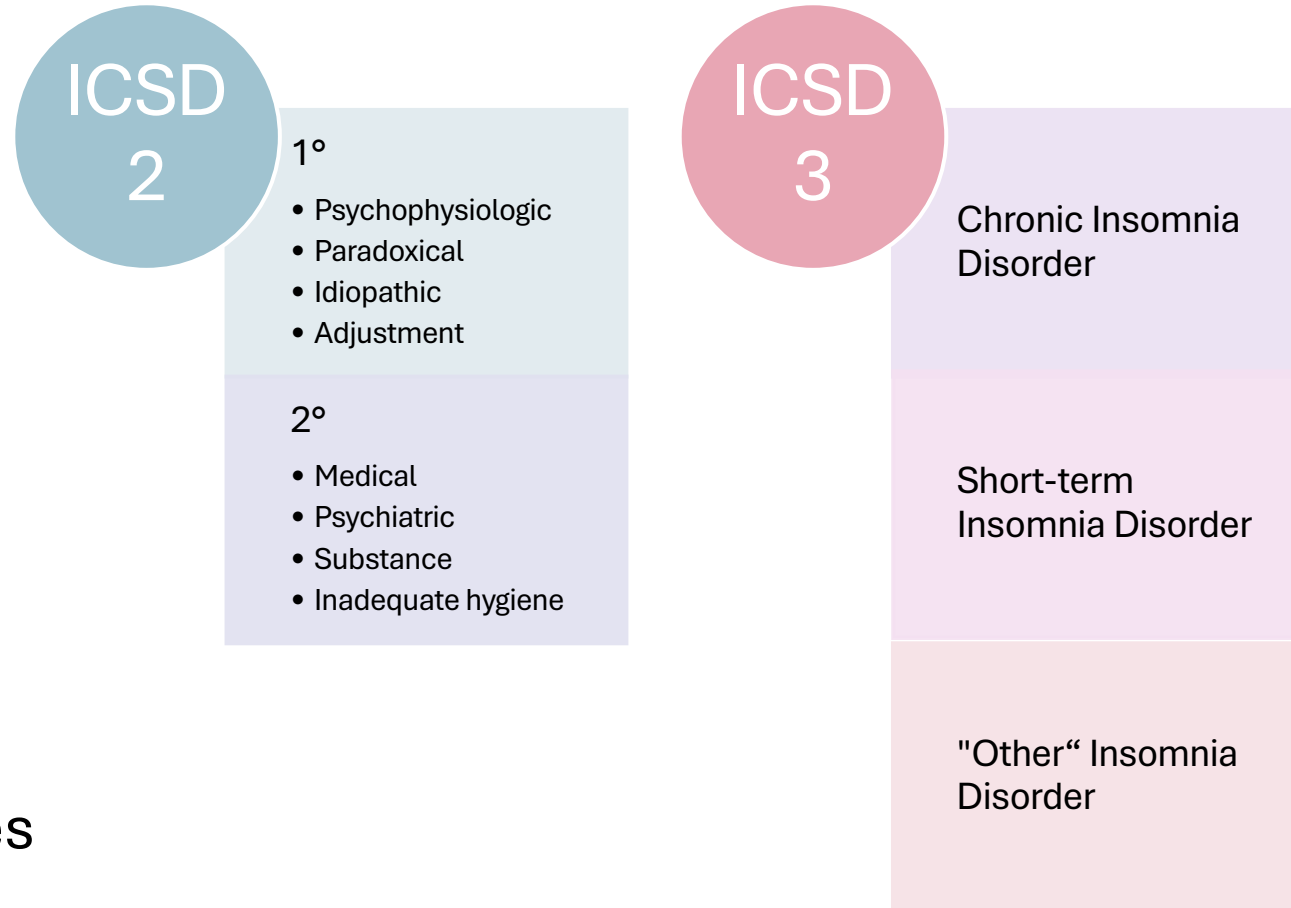
**Chronic insomnia is a relapse predictor**

*Worsening sleep often precedes depressive or anxiety relapse*

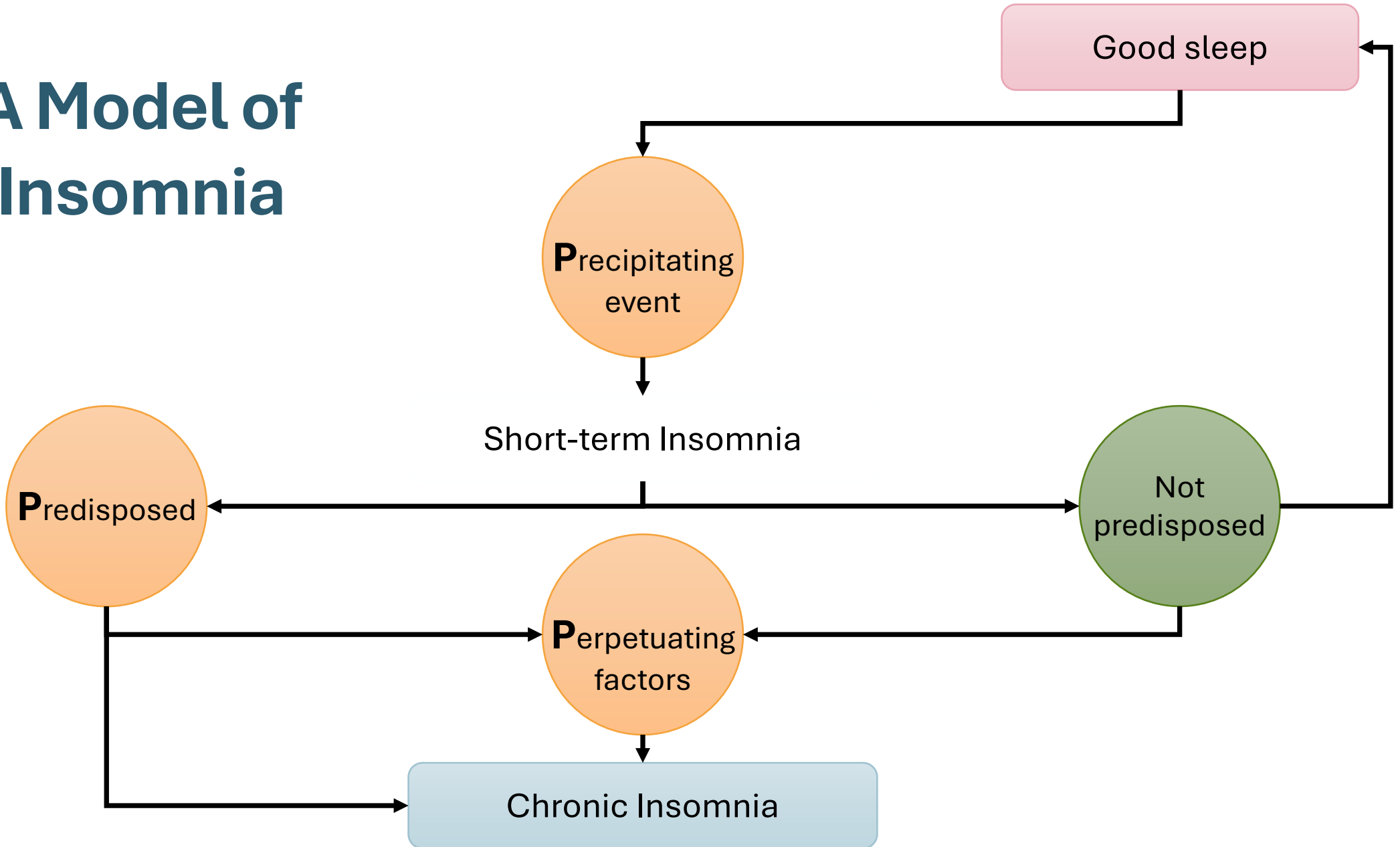
# What causes insomnia?

## Does it matter?

- The International Classification of Sleep Disorders has shifted away from arbitrary "primary" vs "secondary" labels
- Recognizing that insomnia, itself, is a disorder that
  - Necessitates treatment
  - Influences other treatment outcomes



# A Model of Insomnia



# Sleep-Wake Disorders in DSM-5-TR

- **Hypersomnolence Disorder**

- Excessive sleepiness despite adequate sleep time – Idiopathic Hypersomnia
- At least one of the following:
  - Recurrent period(s) of sleep during the day
  - Prolonged main sleep period (9 hours +)
  - Difficulty waking up
- At least 3 times/week for at least 3 months
- Clinically significant distress or impairment

**Long sleep time +  
*nonrestorative* sleep is a clue**

*Individuals can sleep 10–12 hours  
and still feel exhausted*

**Rule out medical and  
medication causes first**

*OSA, hypothyroidism, anemia, and  
sedating psychotropics are far more  
common than primary hypersomnolence*

# Sleep-Wake Disorders in DSM-5-TR



- **Narcolepsy**

- Recurrent period of irrepressible sleep need (excessive daytime sleepiness [EDS])
- At least one of the following:
  - Episodes of cataplexy
  - CSF hypocretin deficiency
  - Sleep paralysis
  - Short REM latency on polysomnography or multiple sleep latency test

**Ask directly about cataplexy**

“Knees buckling with laughter” is highly suggestive and often not volunteered

**Hallucinations at sleep onset are REM phenomena, not psychosis**

*Clarifying timing may prevent unnecessary antipsychotic treatment*



# Chicken or Egg?

## Clues to Hypersomnolence 2/2 a Psychiatric Disorder



- psychiatric symptoms **precede or emerge concurrently**
- no history of **unyielding sleepiness** (or other hypersomnia symptoms) **dating back to adolescence or early**



- heavy, unmotivated inertia
- profound emotional exhaustion, fatigue, or tiredness



- **hypersomnolence resolves**, or markedly improves, when the underlying psychiatric disorder is successfully treated
- Tx not sleep-wake targeted (mood stabilizers or psychotherapy)



# Chicken or Egg?

## Clues to Psychiatric Disorder 2/2 Primary CNS Hypersomnia



- **sleep symptoms precede** the onset of depressive or anxious symptoms by months or years (**often adolescence**)

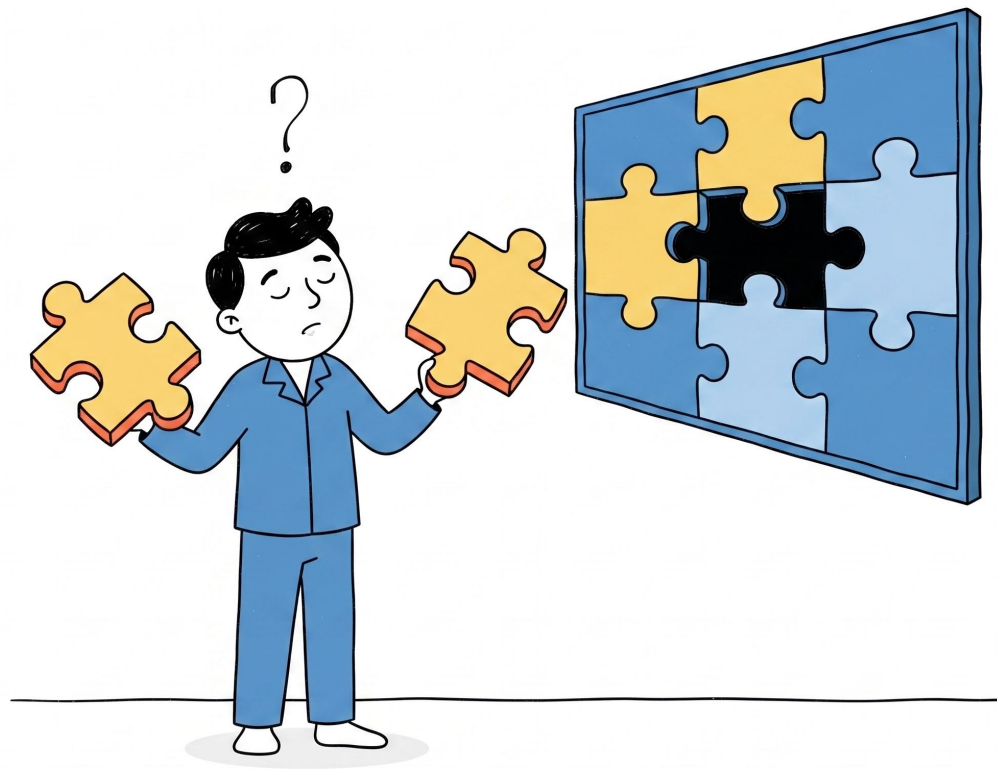


- **actual sleepiness** (ie, inability to maintain consciousness), accompanied by characteristic symptom clusters
- excessive **need for sleep**...not just clinophilia



- **hypersomnolence does not resolve** when the underlying psychiatric disorder is successfully treated
- psychiatric symptoms improve with sleep-targeted Tx

# Ticks *and* Fleas



# Sleepiness *is a symptom*

- ✓ RU\_SATED?
- ✓ CBC
- ✓ Chemistries
- ✓ TFTs
- ✓ Mental health (& Rx)



“

*The symptoms and signs are not better explained by*

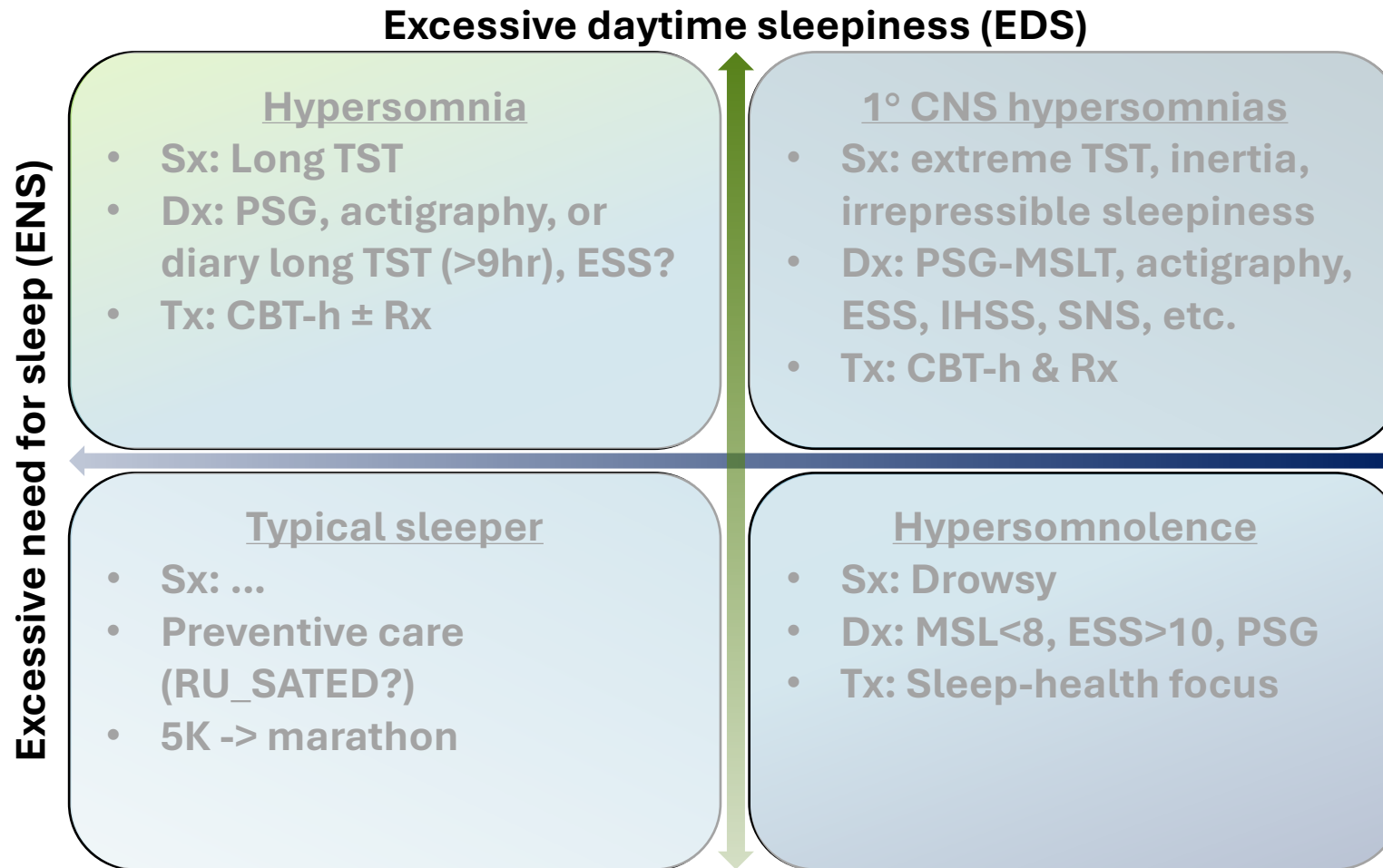
- *chronic insufficient sleep*
- *a circadian rhythm sleep-wake disorder or other current sleep disorder*
- *mental disorder*
- *medication/substance use or withdrawal*

**~ICSD-3-TR**

A yellow rectangular warning label with a black border. On the left is a black icon of a closed eye. To the right of the icon, the text "May Cause" is in a smaller font, and "DROWSINESS" is in a larger, bold font, both in black.

## “PM” drugs

# Sleepiness vs *Sleepiness*

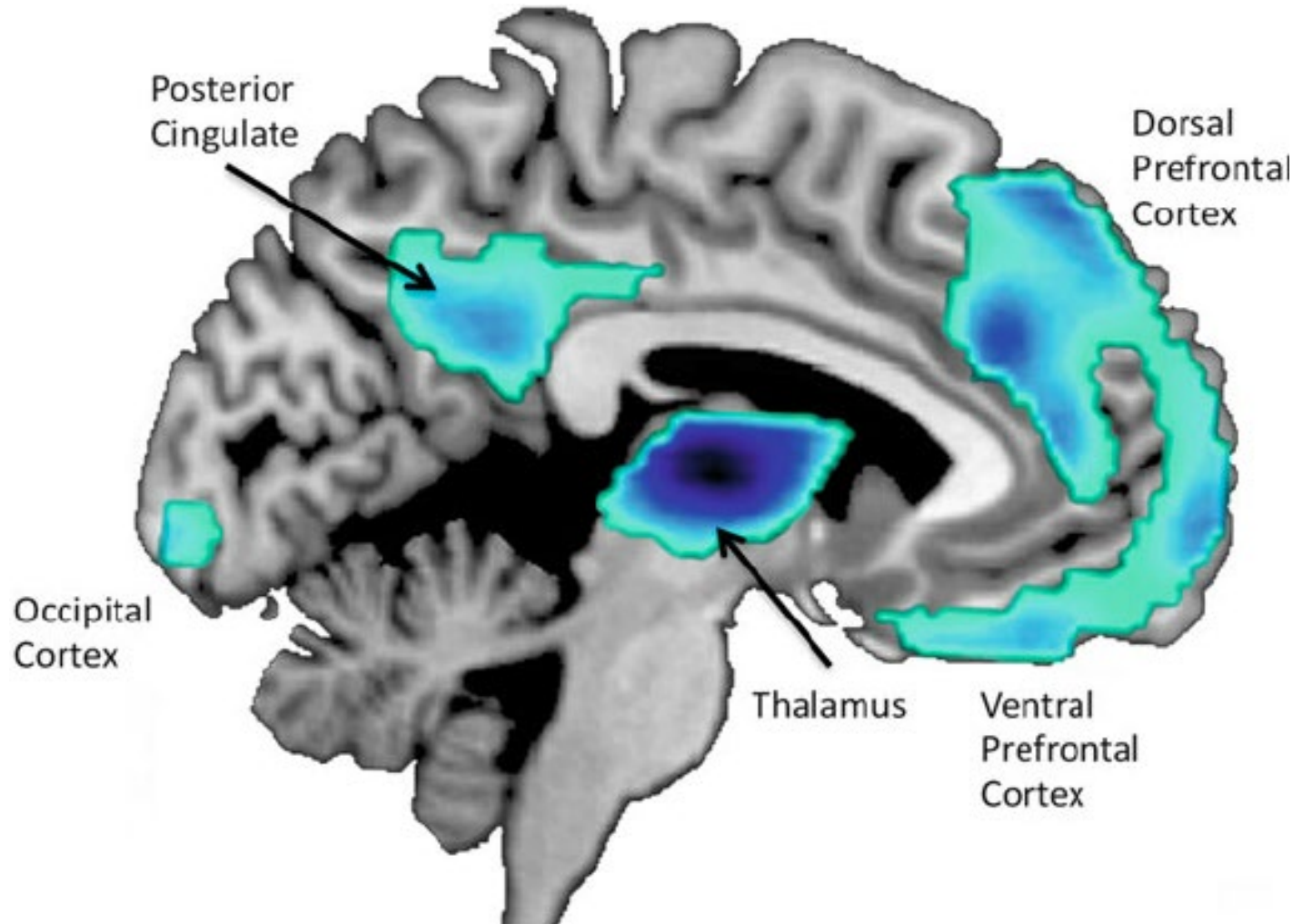


# How Sleep Supports Mental Health

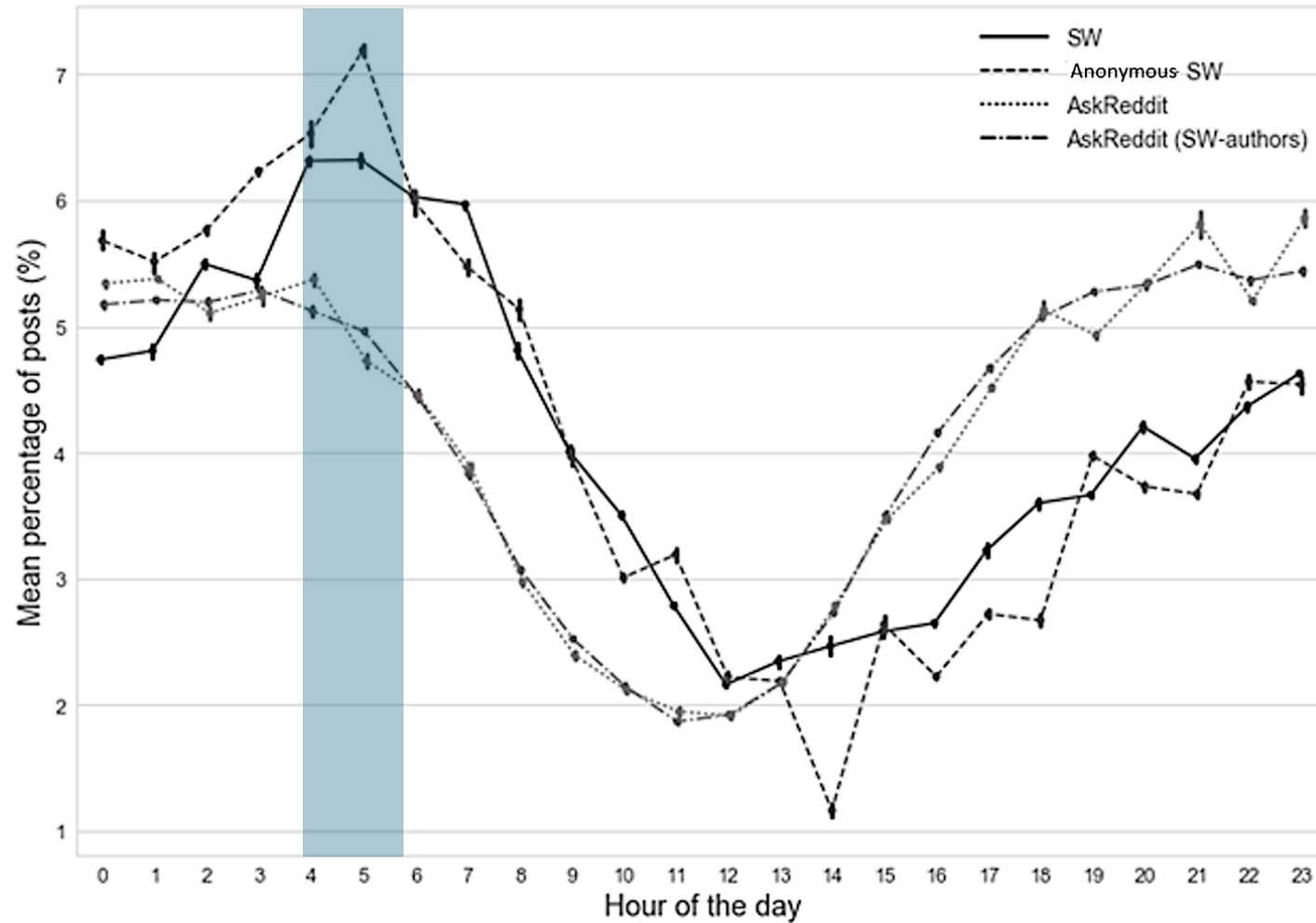
*Lessons Learned From Sleep Insufficiency*

# Running On Fumes: A Depleted Homeostat

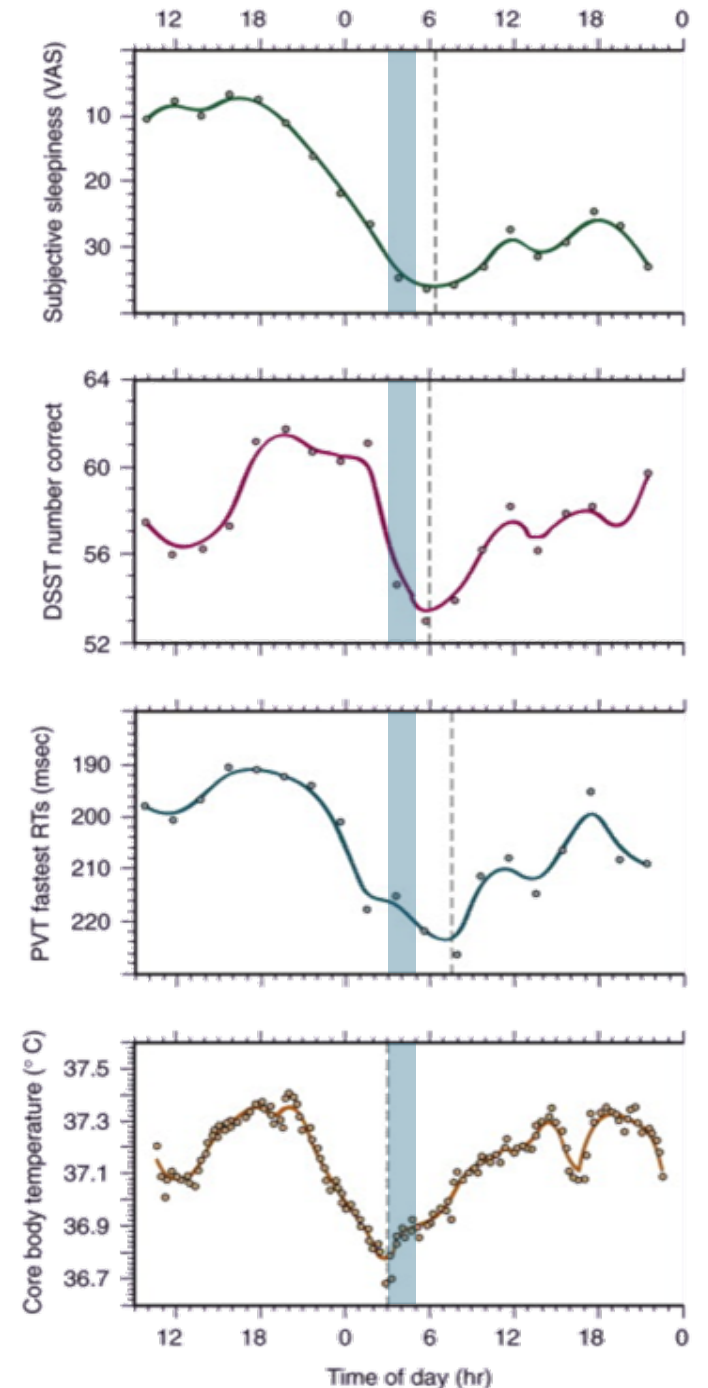
Insufficient ATP stores result in **hypometabolism** in brain areas dedicated to **working memory and executive function**



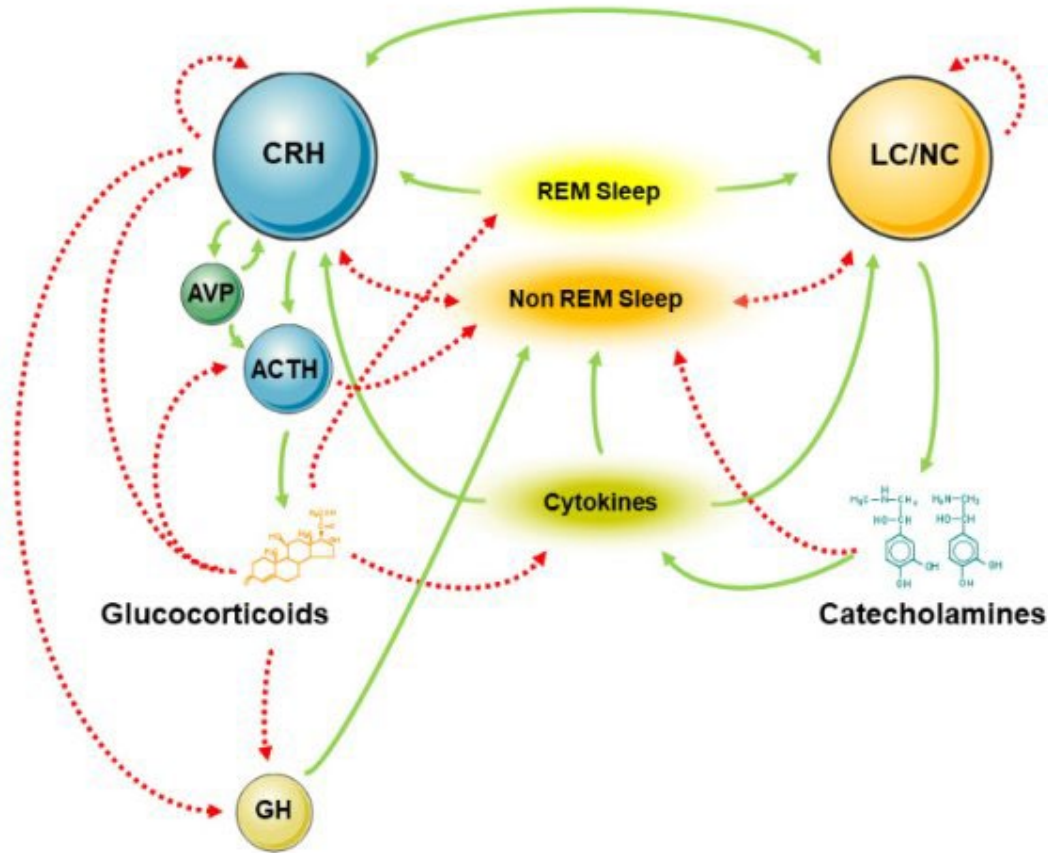
# “Brain after midnight”: circadian vulnerability



Dutta R, et al. *BMC Psychiatry*. 2021;21(1):259.



# Sleeplessness Results in a Stress Response

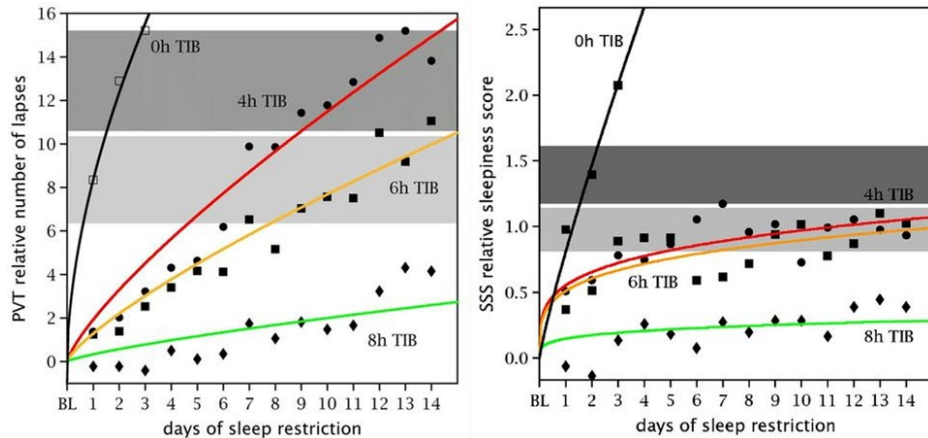


Sleep deficiency upregulates the HPA axis:

- ↑ Corticotropin-releasing hormone
- ↑ Adrenocorticotrophic hormone
- ↑ Glucocorticoids (e.g., cortisol)

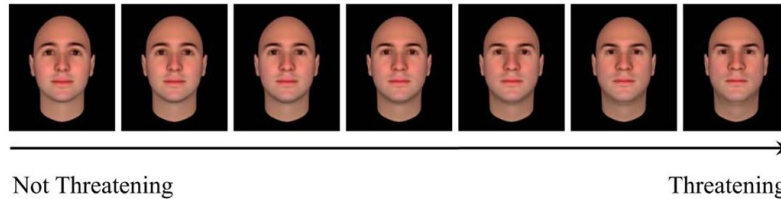
Sleep deprivation also results in **increased sensitivity to pain and threat.**

# We've all experienced the consequences of inadequate sleep



Poorer performance...

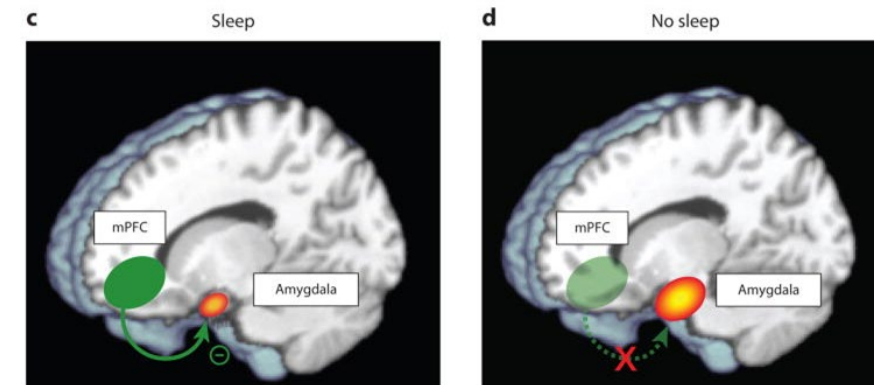
...despite a **lack of awareness**



Misperception of the environment → psychosis

- **Increased** perceived threat and negativity
- **Decreased** emotional contagion (a person's ability to mimic and respond to someone else's emotions), empathy, and emotional regulation

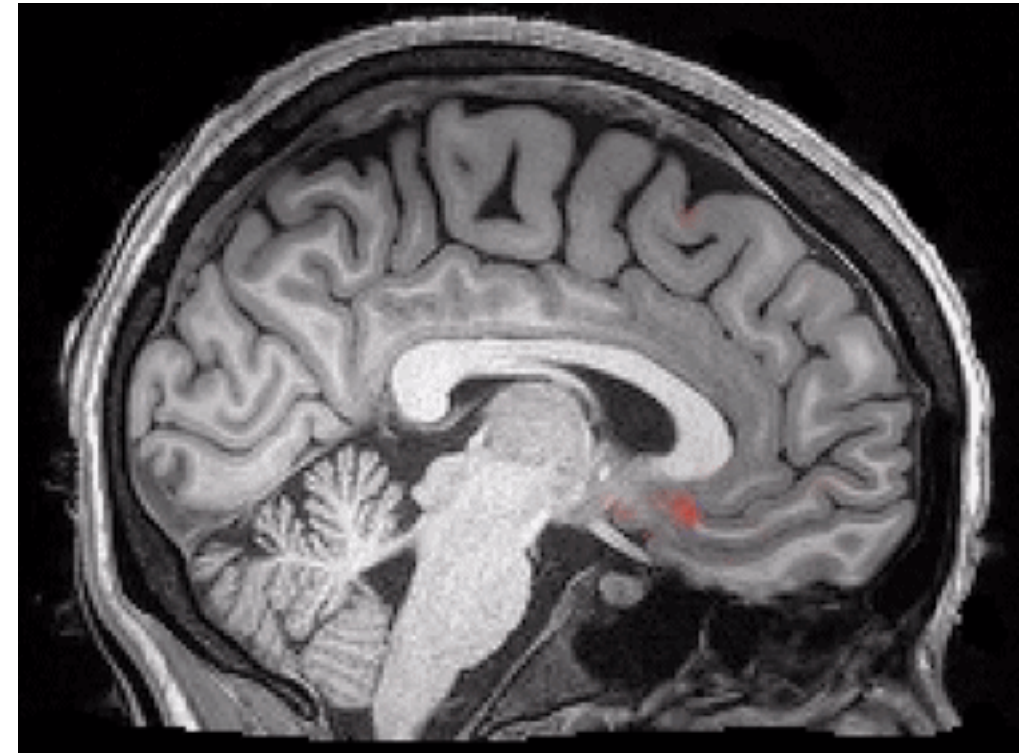
Dysfunctional fear and reward systems



# We need sleep to forget

Not just a time for **flushing out** the accumulation of the day's **toxic byproducts of learning**

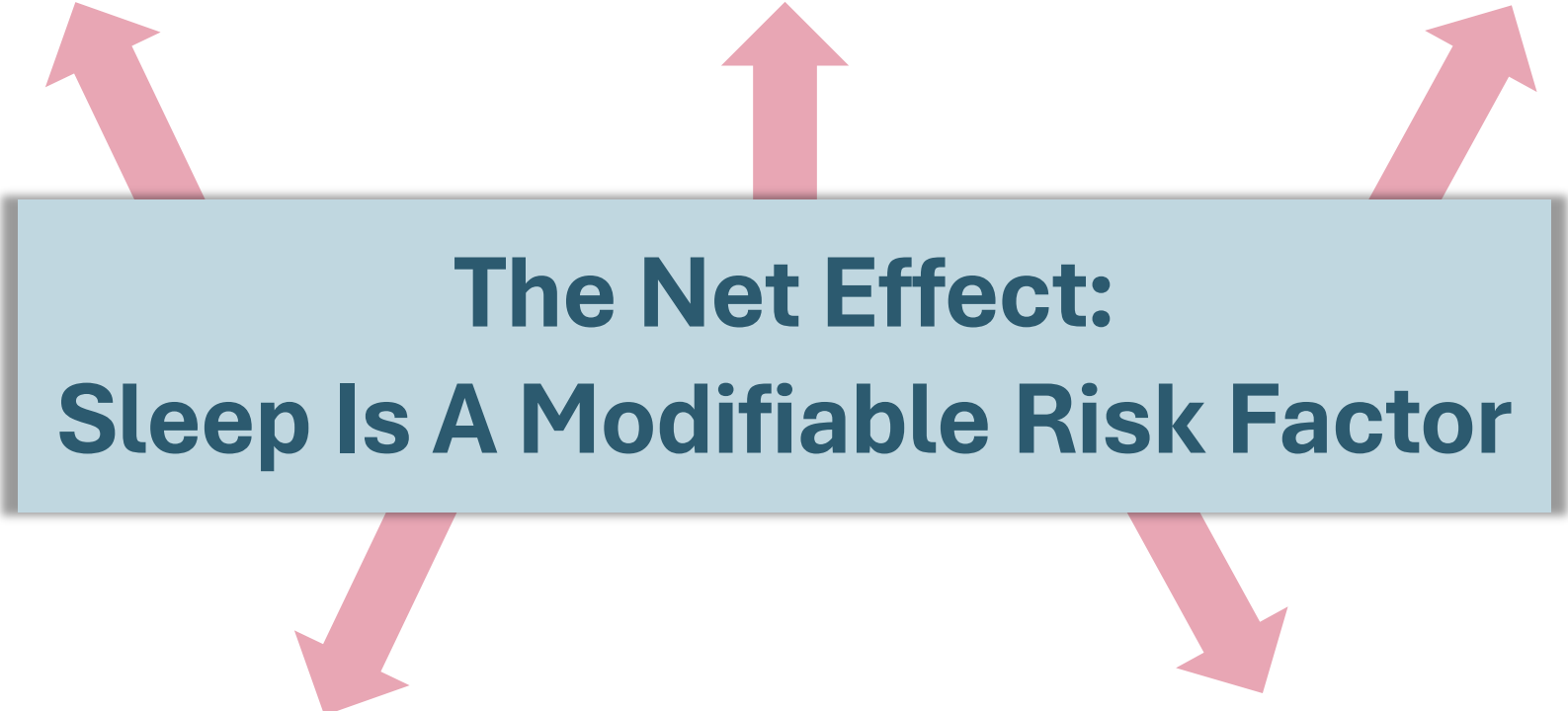
Also, a chance to **downscale synaptic connections** for data that needs to be “unlearned”



**Reduced Treatment  
Response**

**Higher Relapse  
Rates**

**Impaired Emotional  
Regulation**



**The Net Effect:  
Sleep Is A Modifiable Risk Factor**

**Increased Risk  
Behaviors**

**Increased “Self-  
Medication”**

# Key Learning Points



- **Insomnia** is a disorder (regardless of cause) that warrants treatment and affects psychiatric treatment outcomes
- **Hypersomnolence** is often a symptom of underlying pathology
  - **Frequently** iatrogenic
  - **Occasionally** medical/psychiatric
  - **Rarely** primary/neurologic
- Narcolepsy is often (not always) characterized by **cataplexy**
  - “Knees buckling with laughter” is highly suggestive and often not volunteered
- Assessing & addressing sleep health affects your psychiatric care
  - So consider regularly asking your patients...**RU-SATED?**

# **Clinical Strategies to Detect SWDs in Psychiatric Practice**

# Optimal Use of Available Assessment Tools

Think about the **DIMS** and the **DOES**

- DIMS: **D**ifficulty **I**nitiating or **M**aintaining **S**leep (ie, insomnia)
  - Useful questionnaires: Insomnia Severity Index, PROMIS Sleep Disturbance, Pittsburgh Sleep Quality Index, daytime functioning measure
- DOES: **D**isorders **O**f **E**xcessive **S**leepiness
  - Useful questionnaires: Epworth Sleepiness Scale, STOP-BANG to screen for sleep apnea

# Optimal Use of Available Assessment Tools:

## Sleep Diaries

| Today's Date                                                          | 3/15                                                                |                                                          |                                                          |                                                          |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| In total, how long did you nap or doze yesterday?                     | 1:30-2:45 pm                                                        |                                                          |                                                          |                                                          |
| 1. What time did you get into bed?                                    | 11:00 pm                                                            |                                                          |                                                          |                                                          |
| 2. What time did you try to go to sleep?                              | 11:30 pm                                                            |                                                          |                                                          |                                                          |
| 3. How long did it take you to fall asleep?                           | 40 min                                                              |                                                          |                                                          |                                                          |
| 4. How many times did you wake up, not counting your final awakening? | 2                                                                   |                                                          |                                                          |                                                          |
| 5. In total, how long did these awakenings last                       | 1 hour, 5 min                                                       |                                                          |                                                          |                                                          |
| 6a. What time was your final awakening?                               | 6:30 am                                                             |                                                          |                                                          |                                                          |
| 6b. Did you wake up earlier than you planned/desired?                 | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 6c. If yes, how many minutes earlier?                                 | 30 min                                                              |                                                          |                                                          |                                                          |
| 7. What time did you get out of bed for the day?                      | 7:15 am                                                             |                                                          |                                                          |                                                          |
| 8. How would you rate the quality of your sleep?                      | Poor                                                                |                                                          |                                                          |                                                          |
| 9. Comments (if applicable):                                          | I have a cold                                                       |                                                          |                                                          |                                                          |

# Optimal Use of Available Assessment Tools:

## Self-Report Scales

### PSQI

- 19 self-reported items in 7 categories
- Score of 0-4 indicates good sleep, 5-21 indicates poor sleep
- 5 additional questions (unscored) completed by roommate/bed partner

### ESS

- Self-reported rating of likeliness to doze off or fall asleep in 8 situations such as watching tv, as a passenger in a car, or while sitting and talking to someone
- Score >10 is abnormal for Excessive Daytime Sleepiness

### ISI

- Self-reported Likert ratings of 5 questions related to the severity and interference of insomnia in daily functioning, as well as how noticeable to others or distressful to the patient their insomnia has become
- Score of 0-7 indicates no clinical significance, 8-14 indicates subthreshold insomnia, 15-21 moderate clinical insomnia, and 22-28 severe clinical insomnia

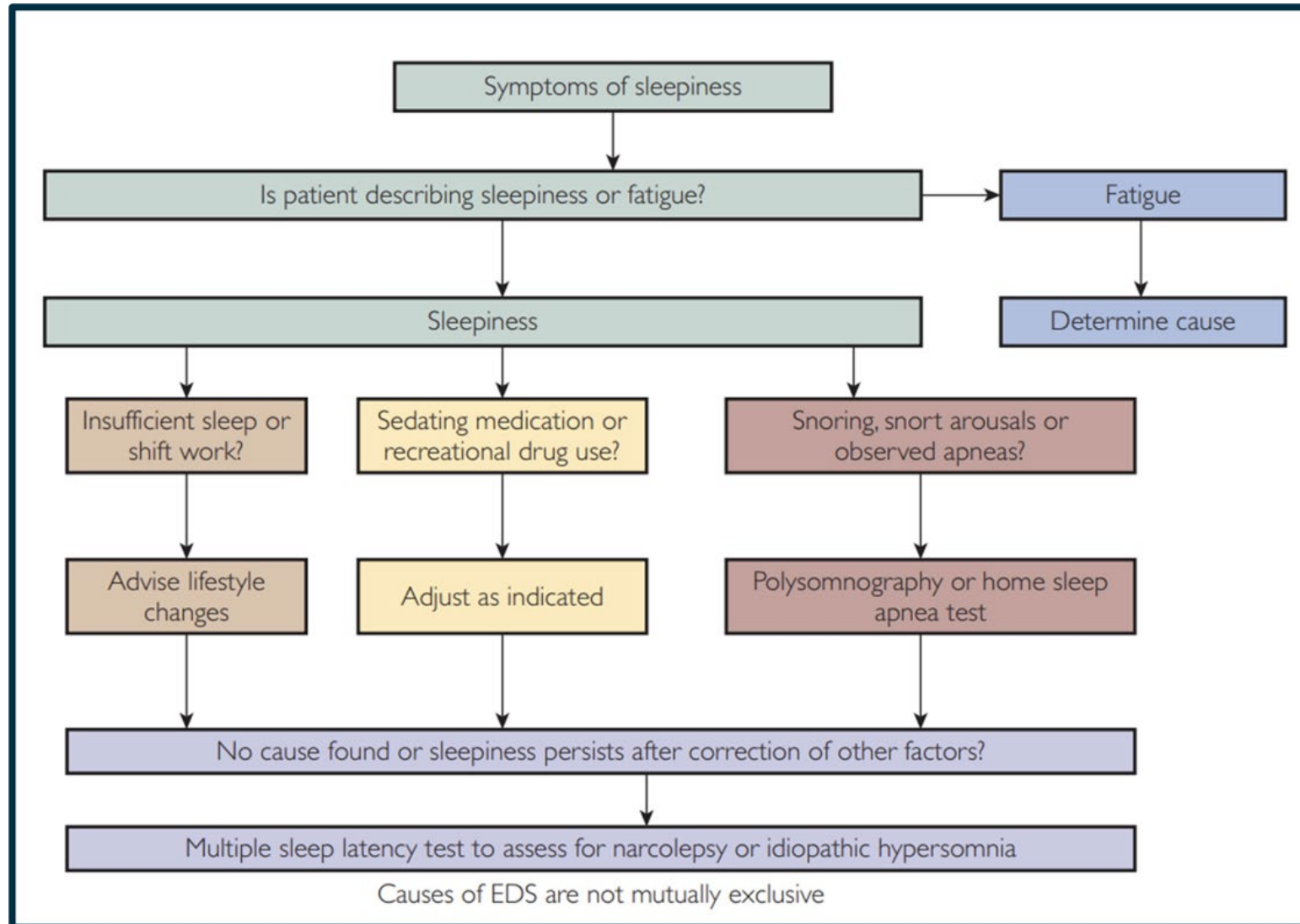
### PROMIS-SD

- 27 total Likert scale questions, available in short form and computerized adaptive test (CAT)
- PROMIS measures are scored using the T-score metric, with 50 being the mean reference population
- Any score above 50 indicates a higher clinical significance—for example, a score of 60 would be one SD higher than the reference population

PSQI = Pittsburgh Sleep Quality Index; ESS = Epworth Sleepiness Scale; ISI = Insomnia Severity Index; PROMIS-SD = Patient-Reported Outcomes Measurement Information System-Sleep Disturbance; SD = standard deviation.

Buysse DJ, et al. *Psychiatry Research*. 1989;28:193-213. Johns MW. *Sleep*. 1991;14(6):540-545. Bastien CH, et al. *Sleep Medicine*. 2001;2:297-307. PROMIS. PROMIS Sleep Disturbance Scoring Manual. Available at: [https://www.healthmeasures.net/images/PROMIS/manuals/PROMIS\\_Sleep\\_Disturbance\\_Scoring\\_Manual.pdf](https://www.healthmeasures.net/images/PROMIS/manuals/PROMIS_Sleep_Disturbance_Scoring_Manual.pdf). Accessed October 25, 2024.

# Evaluation of Excessive Daytime Sleepiness



# Evaluating OSA – STOP BANG

- Risk factors of OSA

**S**: Snoring?

**T**: Tired? (daytime fatigue, sleepiness)

**O**: Observed? (stopping breathing, choking, gasping)

**P**: Pressure? (high blood pressure)

**B**: BMI >35?

**A**: Age >50?

**N**: Neck size large? (Men >16 inches; Women >15 inches)

**G**: Gender = male?

Scoring: Risk for OSA

**Low**: 0-2

**Intermediate**: 3-4

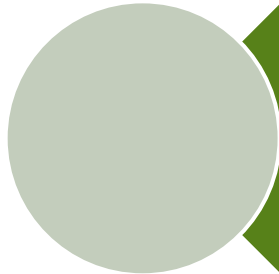
**High**: 5-8

# Utility and Limitations of Consumer Actigraphy

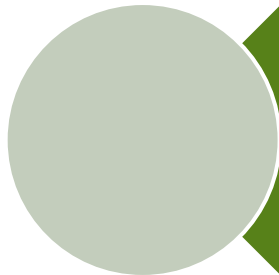
- **Actigraphy:** devices that measure movement (and heart rate, skin temp, etc) to estimate sleep/wake patterns
- Pros: objective, can collect data over long periods of time
- Cons: unknown validity, less accurate with worse sleep



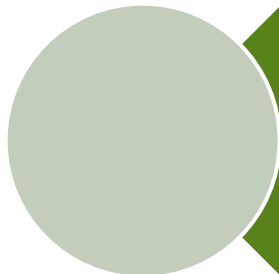
# When to Refer to a Sleep Specialist



If you suspect sleep disorders that require specialized diagnostic assessment or non-mental health treatment (sleep apnea, narcolepsy, etc.)



If a sleep disorder seems to be driving the psychiatric symptoms



If treatment of the psychiatric disorder(s) does not lead to improvement in sleep

# When to Refer to a Sleep Specialist

Further tests conducted by sleep specialists:

- Polysomnography (PSG) – i.e. a sleep study
- Home sleep testing – mainly for apnea
- Multiple Sleep Latency Test (MSLT) and Maintenance of Wakefulness Test (MWT) – repeated opportunities to fall asleep or stay awake across the day

Often the first test performed to rule out other causes of excessive sleepiness (e.g., sleep apnea)

# Developing Competence in Assessing SWDs

- Education in SWDs, and sleep more generally, is usually minimal in psychiatry education
- Develop connections with local sleep medicine providers
  - Most sleep docs have no idea how to manage patients with psychiatric disorders and have no mental health providers on staff
- Consider connecting with relevant organizations
  - Sleep Research Society
  - American Academy of Sleep Medicine

# Key Learning Points

- Basic information about SWDs can be gathered in the clinical history and using self-report measures
- Integrating sleep-focused assessment and treatment into your practice can improve outcomes for your patients
- Refer to a sleep specialist for additional diagnostic testing (e.g. Polysomnography (PSG))

# **Faculty Discussion:** **Integration of Sleep Medicine and Psychiatric Practice**

- 1. Case-Based Challenges**
- 2. Identifying common diagnostic and therapeutic pitfalls**
- 3. Optimizing treatment sequencing and interdisciplinary collaboration**
- 4. Building sustainable referral networks and access to sleep medicine expertise**
- 5. Resources for continued education and consultation**

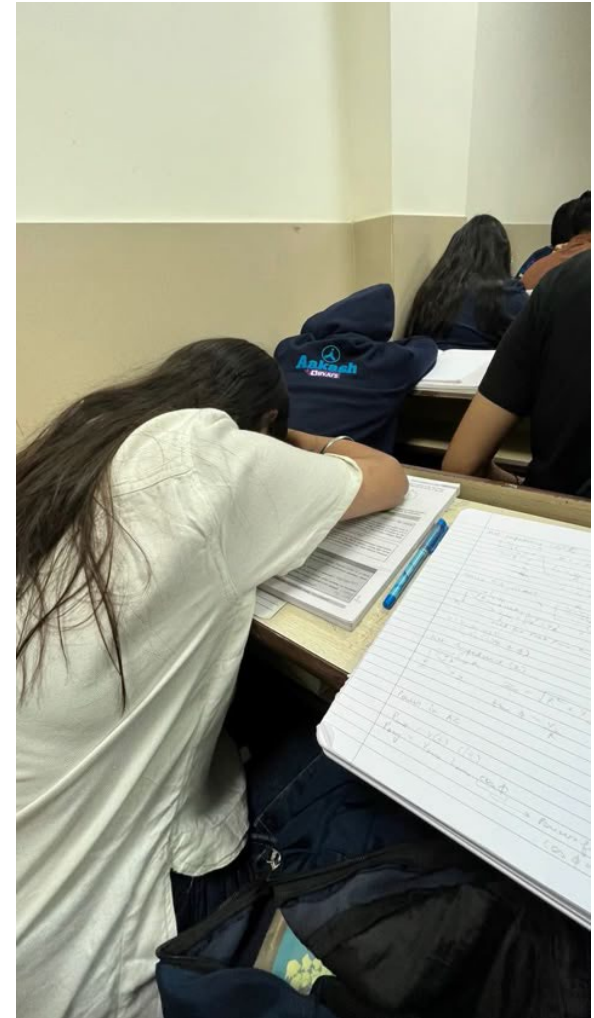
# Case-Based Challenge #1

- 35-year-old man who reports a long history of significant anxiety and insomnia
- Both anxiety and sleep have worsened in the past few years as work-related pressures have increased
- Treatment consisted of a combination of cognitive behavioral therapy and 25 mg sertraline.
  - Note that the medication did not lead to a worsening of insomnia
- After 3 months of treatment, anxiety has decreased, and he feels better able to cope with his work stressors
- However, insomnia has not improved and is negatively impacting daytime function



## Case-Based Challenge #2

- 21 y/o woman is referred to you for persistent low mood, anxiety, and feeling tired all the time.
- She reports that she's been "depressed" since high school, when, because of "poor sleep" and constant napping she went from being an A-student to Cs and Ds.
  - She barely graduated and now works in a department store for schedule flexibility
- She also reports that social situations make her "anxious" because she feels like her body's about to give out any time something surprises her.



## Case-Based Challenge #2

- In her senior year she was started on venlafaxine and titrated to 150mg with some improvements in daytime energy levels and feelings of nervousness in groups, but she continues to struggle with her symptoms.
- On probing a bit more into her sleep issues, she reports falling asleep as soon as her "head hits the pillow" however wakes up frequently throughout the night. She notes vivid dreams, and at times feels as if she is dreaming even before she's fallen asleep.
- To make it through the day, she'll grab a quick nap in her car during breaks at work.
- She's moved back in with her parents, because she's worried her life is "falling apart" so her PCP referred her for refractory depression and anxiety.

# **Accessing Further Education/Consultation in Sleep Medicine**

# Accessing Further Education/Consultation in Sleep Medicine



Sleep  
Research  
Society  
Foundation

The **Sleep Research Society Foundation** is committed to the growth and development of the field of sleep and circadian research through education and funding opportunities.

**Learn more by visiting their website:**

<https://sleepresearchsociety.org/foundation/>



# Practical Take-Aways

- Sleep/wake disorders are common in individuals with psychiatric conditions, and each may worsen the other
- The neurobiology of sleep and wake is complex, and the orexin system is a key integrator of sleep, wake, circadian, and overall health and wellness
- Integrating sleep-focused assessment into your practice can improve outcomes for your patients; this can be done with a variety of screening tools, but a simple sleep diary can be very helpful as well!



Q&A