



# Treatment of Chronic Insomnia

*Kelly Glazer Baron, PhD, MPH, CBSM*

*April 25, 2019*

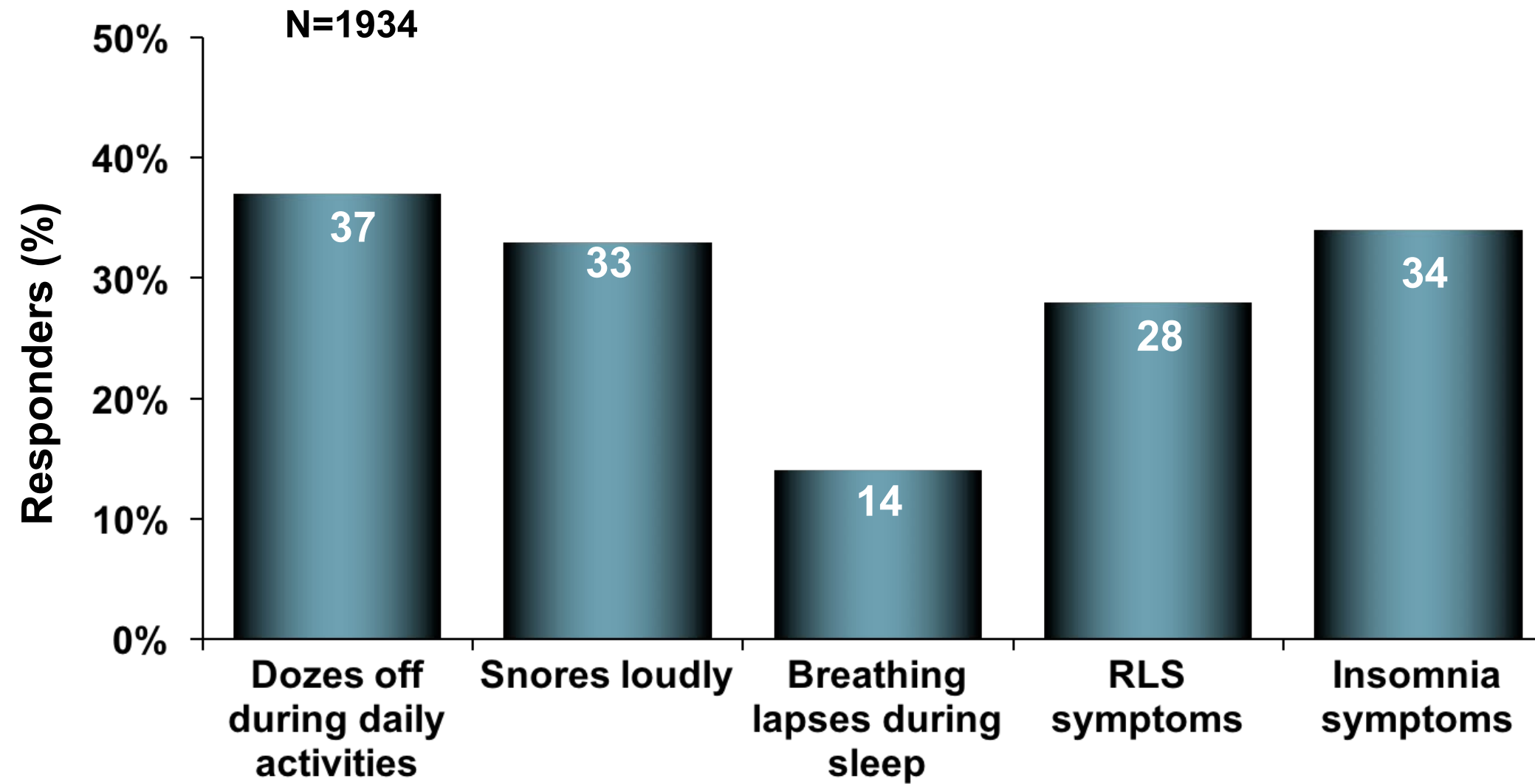
# DISCLOSURES

- None

# OVERVIEW

1. **Insomnia in primary care**
2. **Treatment position statements**
3. **Treating insomnia in the BSM clinic**
4. **Treating insomnia primary care settings**
5. **What you should do/no do in primary care**
6. **Who to treat in primary care/who to refer**

# INSOMNIA IN PRIMARY CARE



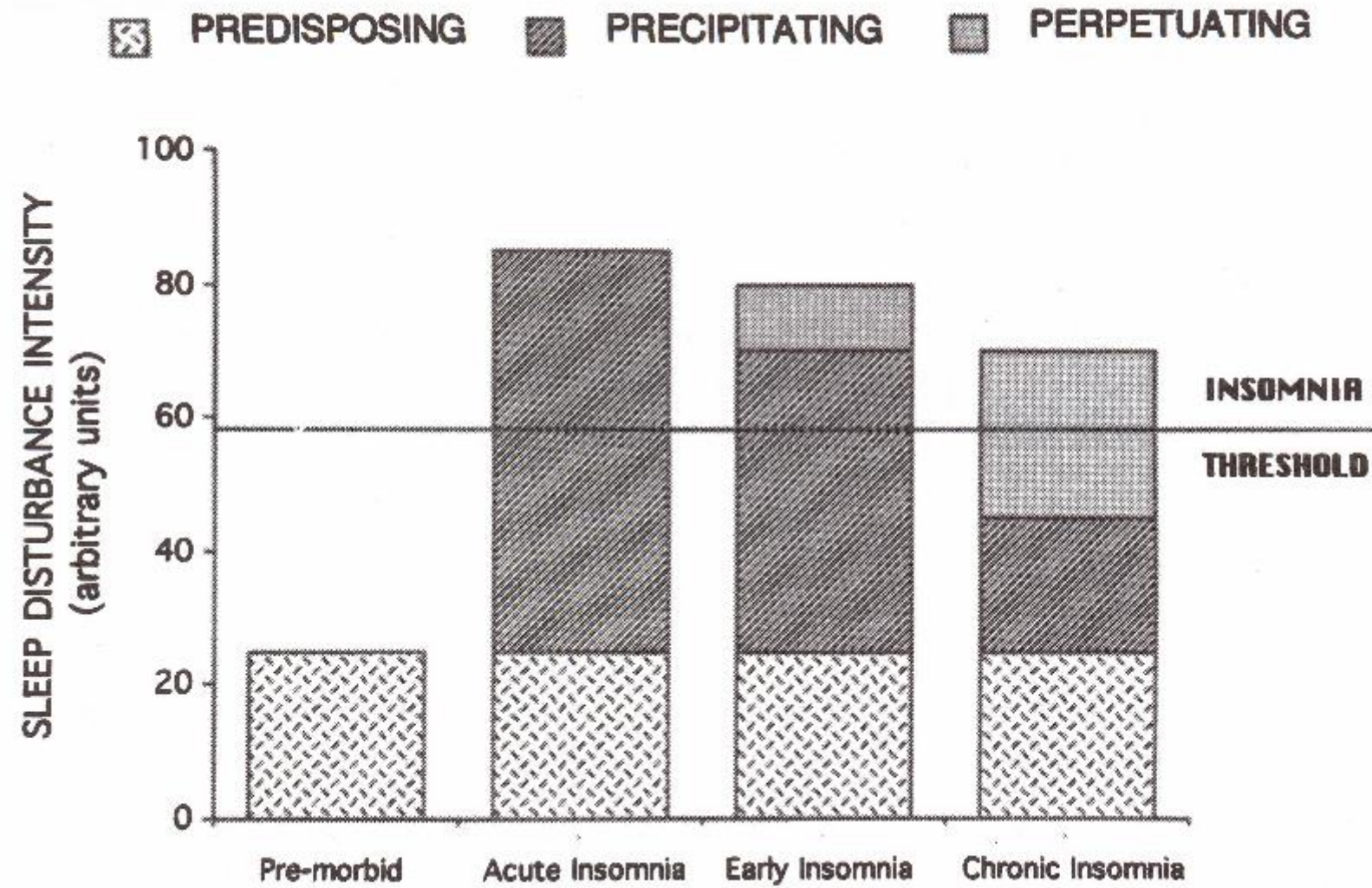
# DIAGNOSING INSOMNIA: WHAT TO ASK

- Do you have any concerns about your sleep?
- Do you have trouble falling asleep? or staying asleep?
- Do you need to take something in order to sleep? Or to stay awake during the day?
- How many hours are you sleeping on the typical night?
- Are you sleepy during the day?
- Do you snore or have pauses in your breathing at night?

# CHRONIC INSOMNIA DISORDER

- Difficulty initiating, maintaining sleep, or waking up too early, or
  - Resisting going to bed on schedule, or
  - Difficulty sleeping w/o parent/caregiver
- 
- Adequate opportunity for sleep
  - At least 1 daytime consequence
  - At least 3 nights per week
  - At least 3 months (Acute insomnia: < 3 months)

# HOW INSOMNIA DEVELOPS



Spielman & Glovinsky, in Hauri, 1991

# PERPETUATING FACTORS IN INSOMNIA

- too much time in bed
- “catch sleep if it occurs”
- sleep later when possible
- nap after poor night’s sleep

## Behavioral

- caffeine & stimulants for sleepiness
- alcohol self-medicating for sleep
- random/habitual use of hypnotics

## Pharmacologic

- expectations of poor sleep
- unreasonable concerns over next-day consequences

## Cognitive

Spielman, Clinical Psychology Review, 1986  
Wyatt & Crisostomo, in Sleep Medicine, 2008



# HOW IS INSOMNIA DIAGNOSED

NO!

- A sleep study
- A sleep medicine physician evaluation

Yes!

- Clinical interview
- Other options
  - Standardized questionnaires
  - Sleep logs
  - Activity monitoring (actigraphy)



---

# Treatment options

# PHARMACOLOGIC TREATMENT OF INSOMNIA DISORDER: AN EVIDENCE REPORT FOR A CLINICAL PRACTICE GUIDELINE BY THE AMERICAN COLLEGE OF PHYSICIANS

- Conclusion: Eszopiclone, zolpidem, and suvorexant may improve short-term global and sleep outcomes for adults with insomnia disorder, but the comparative effectiveness and long term efficacy of pharmacotherapies for insomnia are not known. Pharmacotherapies for insomnia may cause cognitive and behavioral changes and may be associated with infrequent but serious harms.

Wilt et al., Ann Int Med 2016

# Sedative Hypnotic Medication Use and the Risk of Motor Vehicle Crash

**Ryan N. Hansen, PharmD, PhD, Denise M. Boudreau, PhD, Beth E. Ebel, MD, MSc, MPH, David C. Grossman, MD, MPH, and Sean D. Sullivan, PhD**

*Methods.* We conducted a new user cohort study of 409 171 adults in an integrated health care system. Health plan data were linked to driver license and collision records. Participants were aged 21 years or older, licensed to drive in Washington State, had at least 1 year of continuous enrollment between 2003 and 2008, and were followed until death, disenrollment, or study end. We used proportional hazards regression to estimate the risk of crash associated with 3 sedatives.

*Results.* We found 5.8% of patients received new sedative prescriptions, with 11 197 person-years of exposure. New users of sedatives were associated with an increased risk of crash relative to nonuse: **temazepam hazard ratio (HR) = 1.27** (95% confidence interval [CI] = 0.85, 1.91), **trazodone HR = 1.91** (95% CI = 1.62, 2.25), and **zolpidem HR = 2.20** (95% CI = 1.64, 2.95). These risk estimates are equivalent to blood alcohol concentration levels between 0.06% and 0.11%.

Read More: <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2015.302723>

# PRESCRIBING SHORT-TERM HYPNOTICS? (MORIN 2009)

- No significant difference in response to CBT or outcome with short term hypnotic prescription (6 weeks).
- Overall, 60% responded and 42% remitted
- Zolpidem as needed after 6 weeks did not confer a benefit.

# MANAGEMENT OF CHRONIC INSOMNIA DISORDER IN ADULTS: A CLINICAL PRACTICE GUIDELINE FROM THE AMERICAN COLLEGE OF PHYSICIANS

**Recommendation 1:** ACP recommends that all adult patients receive cognitive behavioral therapy for insomnia (CBT-I) as the initial treatment for chronic insomnia disorder. (Grade: strong recommendation, moderate-quality evidence)

**Recommendation 2:** ACP recommends that clinicians use a shared decision-making approach, including a discussion of the benefits, harms, and costs of short-term use of medications, to decide whether to add pharmacological therapy in adults with chronic insomnia disorder in whom cognitive behavioral therapy for insomnia (CBT-I) alone was unsuccessful. (Grade: weak recommendation, low-quality evidence)

*Ann Intern Med.* 2016;165:XXX-XXX. doi:10.7326/M15-2175 [www.annals.org](http://www.annals.org)

For author affiliations, see end of text.

This article was published at [www.annals.org](http://www.annals.org) on 3 May 2016.

### 3. BEHAVIORAL SLEEP MEDICINE AT UUSWC: WHAT WE DO

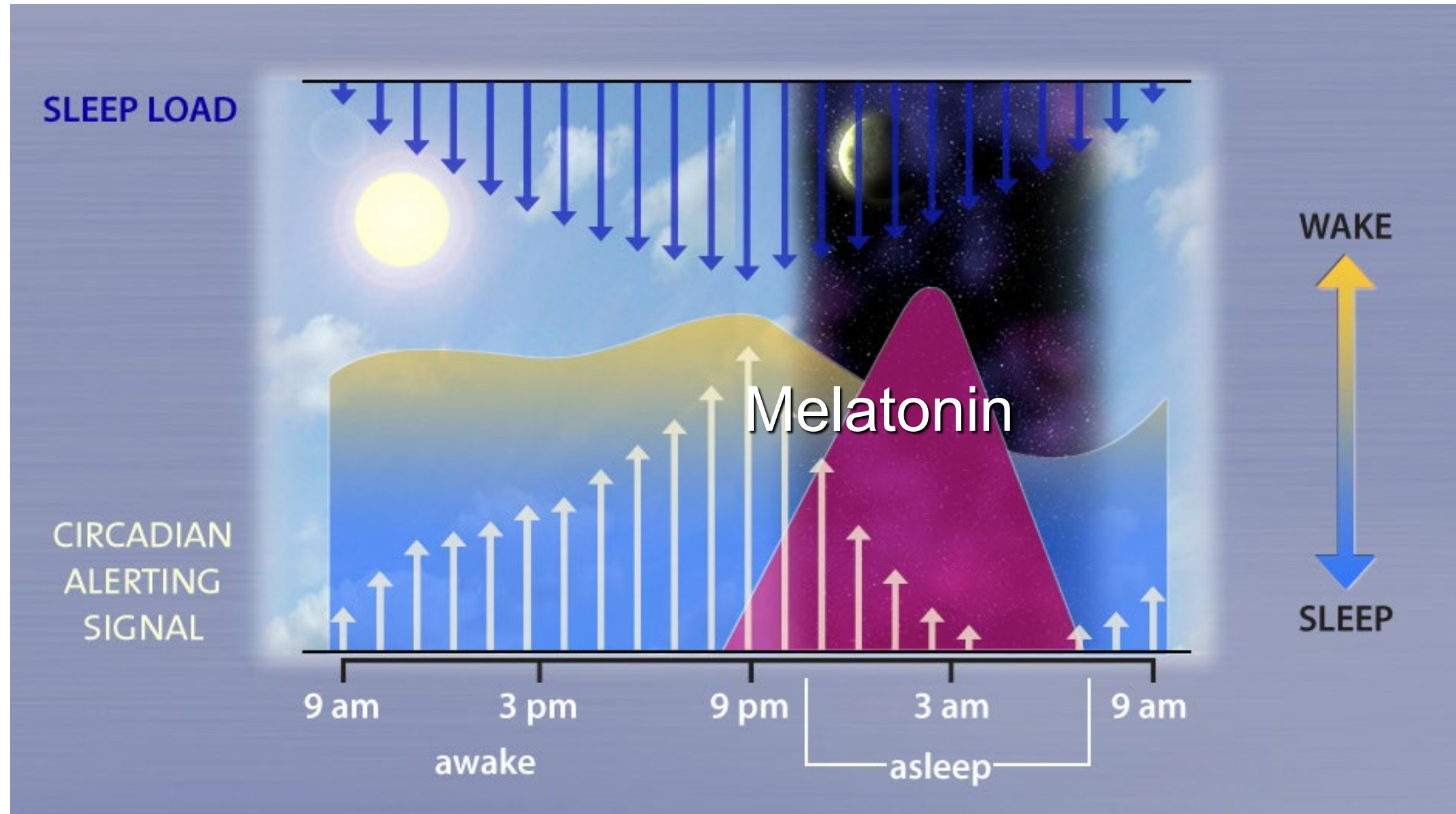
- CBT for insomnia
- PAP non-compliance
- Nightmare disorder
- Circadian rhythm disorders, shift work
- Non-pharmacologic treatment for parasomnia
- Coping with hypersomnia

## 4. COMPONENTS OF CBT-I

- Brief (4-6 sessions), time limited (weekly, bi-weekly)
- Specialized (not all therapists are trained to do it)
- Multicomponent
  - Sleep Restriction/ Sleep Compression
  - Stimulus Control
  - Sleep Hygiene Education
  - Cognitive Restructuring
  - Relaxation Training



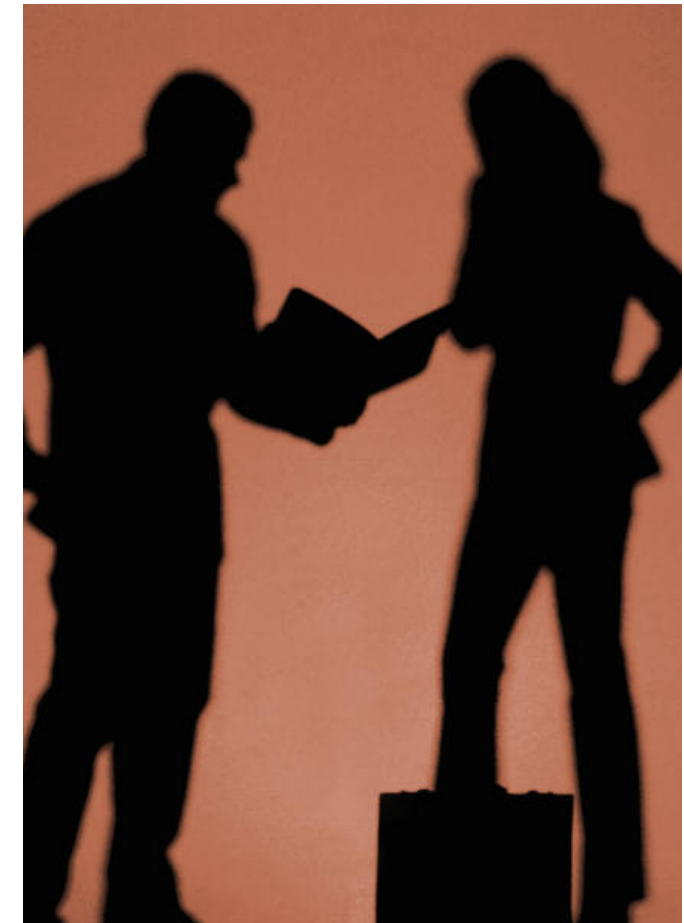
# Circadian and Homeostatic Regulation of Sleep



Adapted from Edgar et al. *J Neurosci.* 1993

# ISSUES WE DISCUSS BEFORE STARTING .....

- Is this the right treatment?
  - What are the alternatives available?
  - Is additional treatment needed for physical or psychiatric disorders?
  - Is the patient able/willing to put in the time?
  - Sleep medications?



# OTHER REASONS FOR DIFFICULTY SLEEPING

- Circadian disorders
- Restless legs syndrome
- Sleep apnea

# CIRCADIAN RHYTHM SLEEP DISORDERS

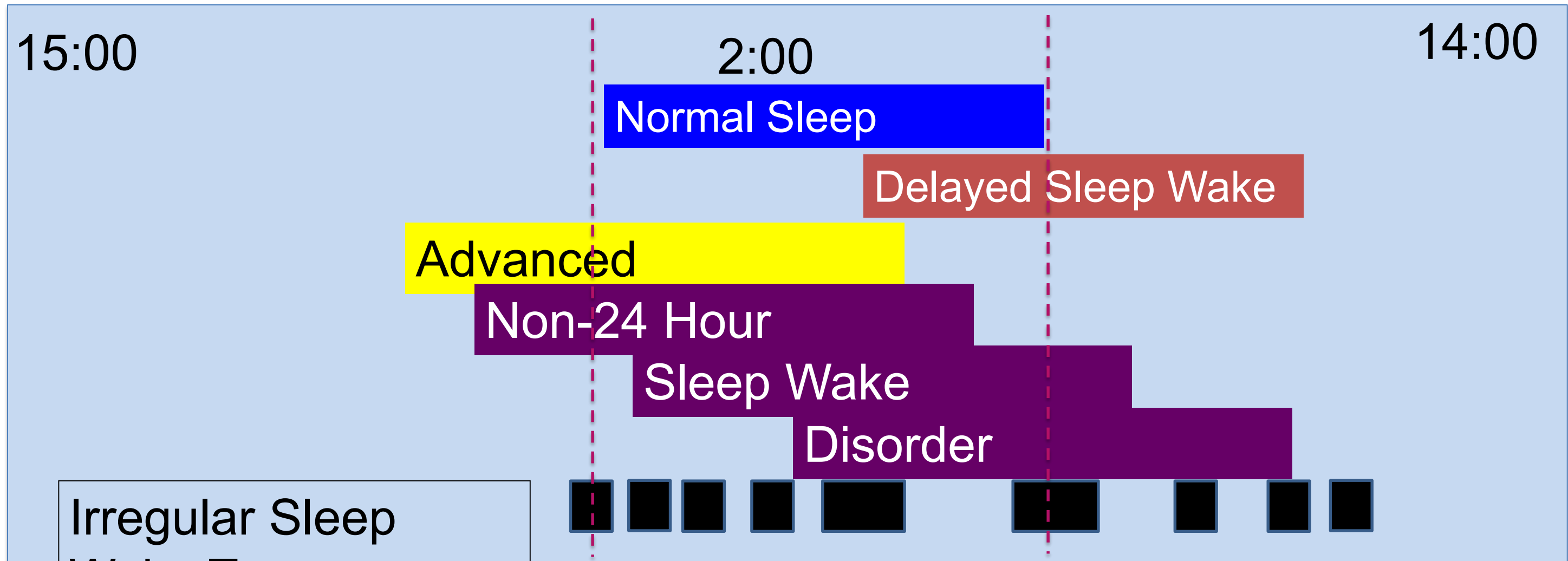
- Extrinsic

- Jet lag
- Shift work

- Intrinsic

- Advanced sleep-wake phase disorder
- Delayed sleep-wake phase disorder
- Irregular sleep-wake phase disorder
- Non-24 hr sleep rhythm disorder

# CIRCADIAN RHYTHM SLEEP WAKE DISORDERS

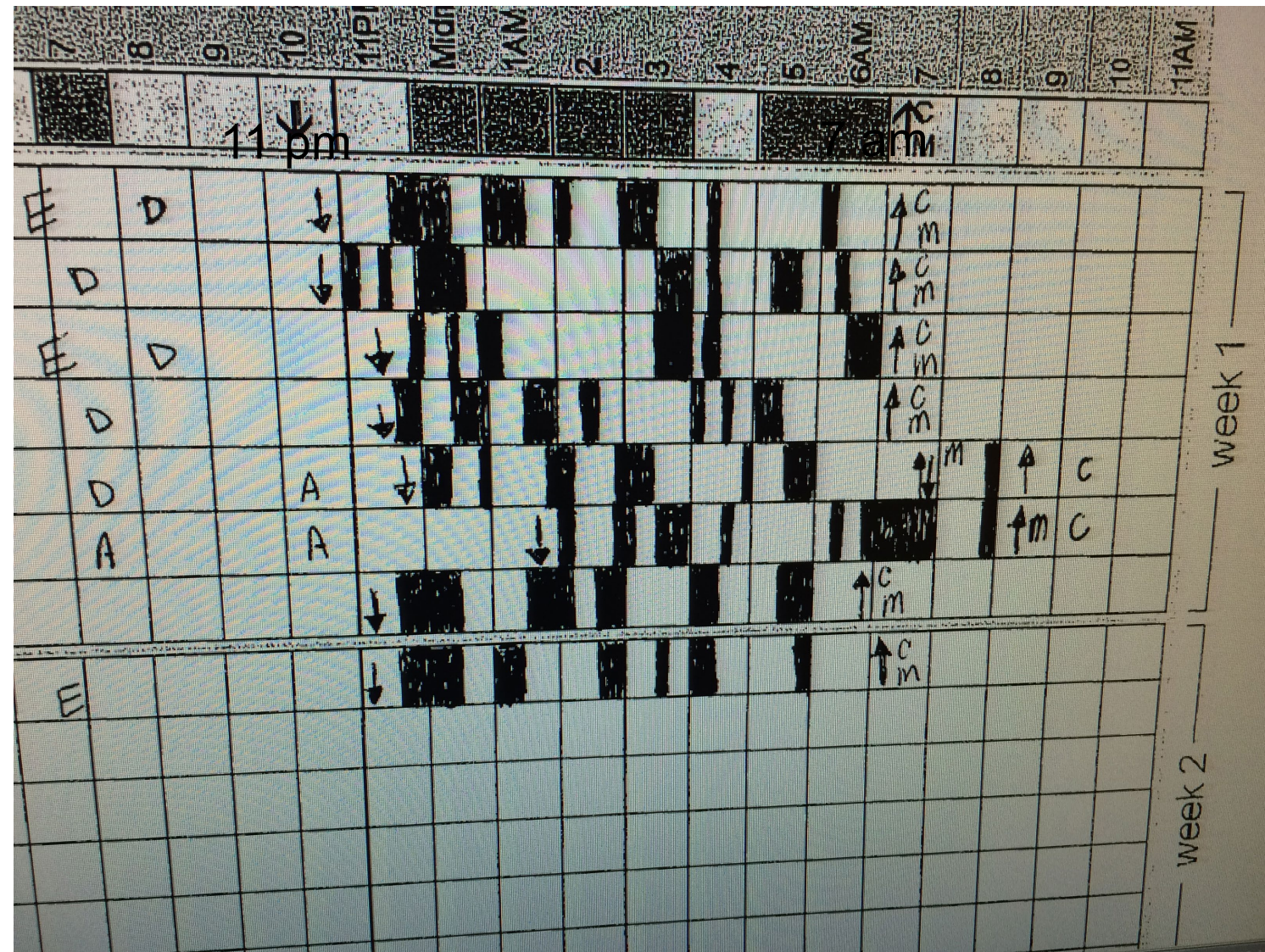


# SLEEP RESTRICTION (SPIELMAN)

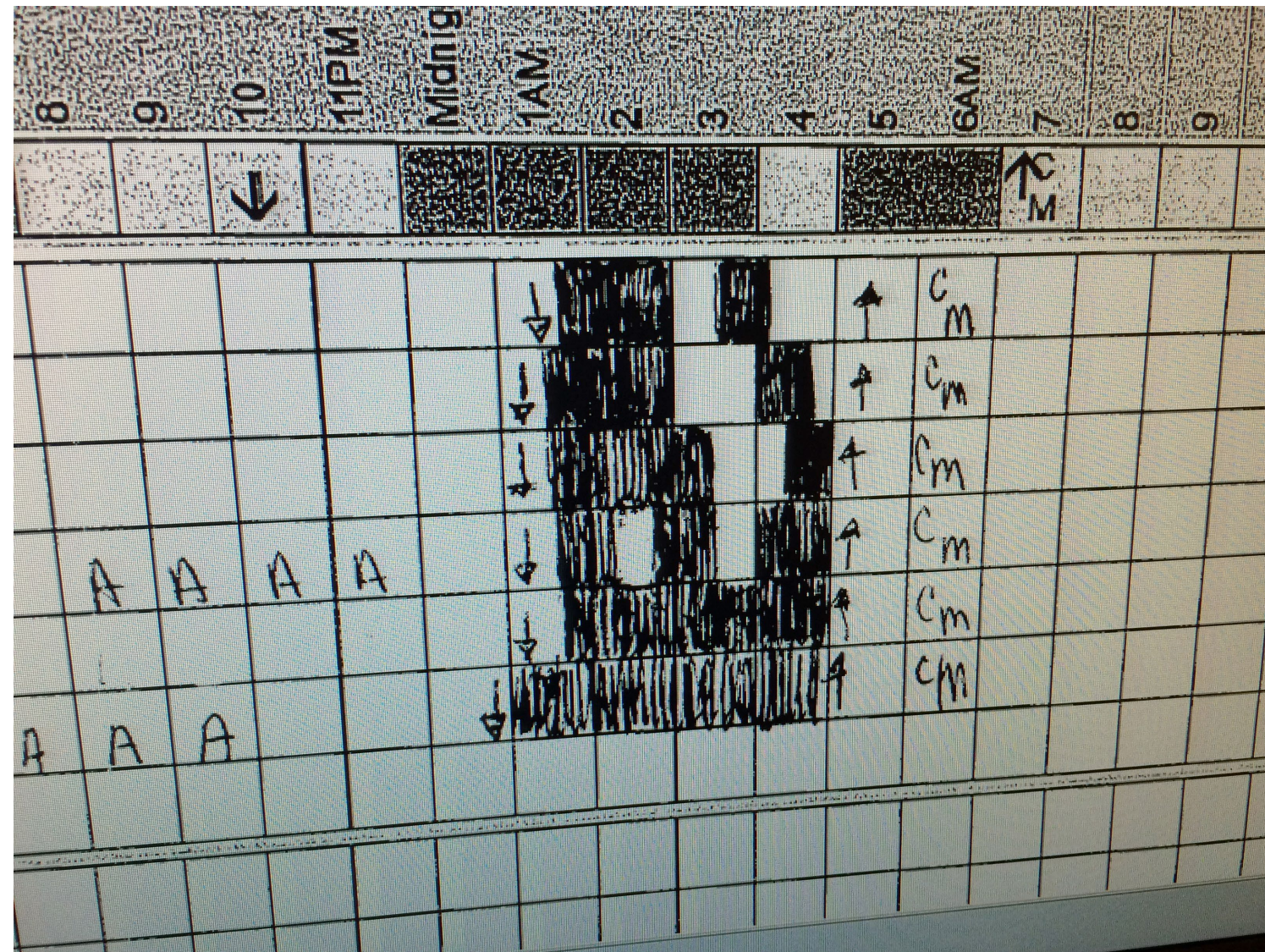
- Increases drive to sleep by restricting time in bed
- Set the “sleep window” to the hours actually asleep on the sleep diary (minimum of 5 hrs)
- Adjust the window based on % of the sleep window they are sleeping
  - Increase or decrease based on % of time sleeping
  - Adjust by 15 or 20 min
  - Keep stable if SE = 80-90%

# Baseline sleep diary

Total sleep time= 3 hrs

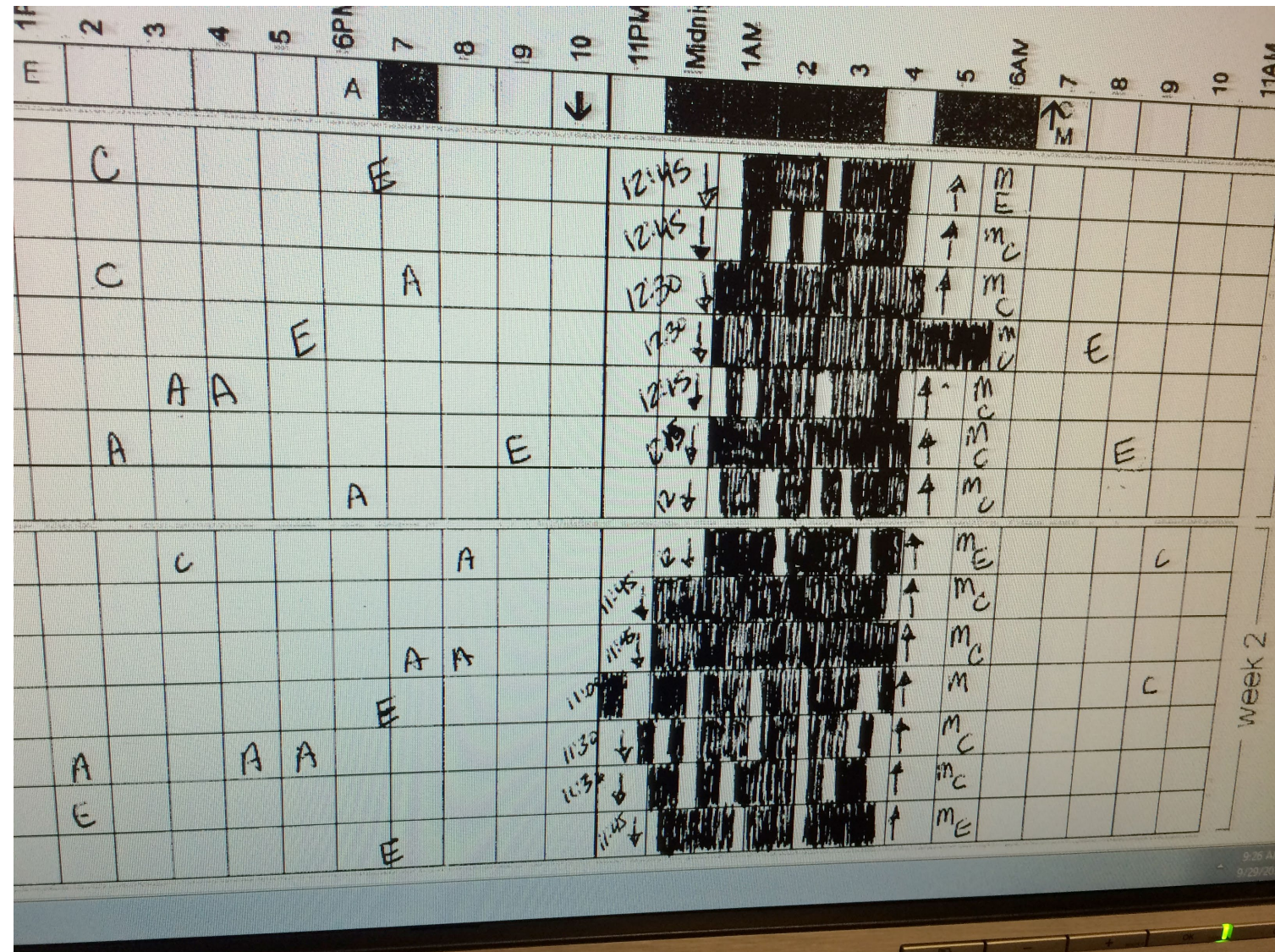


# SLEEP RESTRICTION WEEK 1. LIMITED TO 5 HOURS TIME IN BED

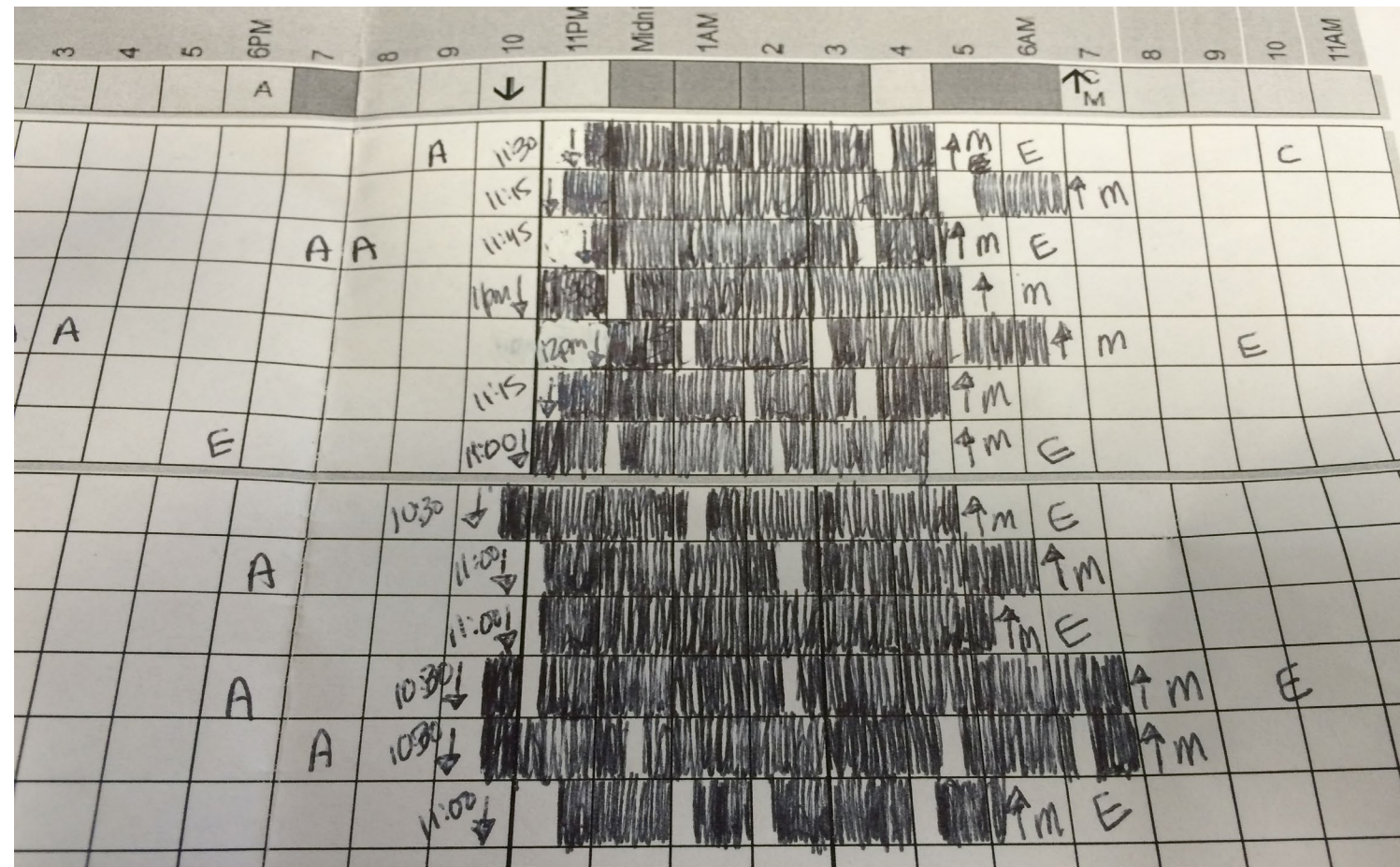




# SLEEP RESTRICTION WEEKS 2-3 GRADUALLY MOVED BEDTIME EARLIER



# SLEEP RESTRICTION 4-5 REACHED HER GOAL SLEEP TIME



## STIMULUS CONTROL (BOOTZIN)

- Don't get into bed unless sleepy
- Use bed only for sleep and sex
- Get out of bed after 15-20 min awake
- Avoid daytime napping
- Get up at the same time each morning

\* Note- the effects should be judged over a week or more

# IMPROVING SLEEP HABITS (SLEEP HYGIENE)

- Reduce obviously problematic behaviors (caffeine, alcohol)
- Some they may not think of (e.g. reducing fluids in the evening, 2 pm coffee)
- Needs a plan and follow-up

# RELAXATION TRAINING (NOT A STAND ALONE SOLUTION)

- Breathing
- Progressive muscle relaxation
- Free apps- Insight timer

# INSOMNIA JEOPARDY

WAYS IN WHICH PEOPLE HAVE WRONGED ME	STRANGE NOISES	DISEASES I PROBABLY HAVE	MONEY TROUBLES	WHY DID I SAY/DO THAT?	IDEAS FOR A SCREENPLAY
\$10	\$10	\$10	\$10	\$10	\$10
\$20	\$20	\$20	\$20	\$20	\$20
\$30	\$30	\$30	\$30	\$30	\$30
\$40	\$40	\$40	\$40	\$40	\$40
\$50	\$50	\$50	\$50	\$50	\$50

# COGNITIVE RESTRUCTURING

- Identify, evaluate, and replace dysfunctional beliefs
- Targets
  - Unrealistic sleep expectations
  - Misconceptions about insomnia
  - Catastrophic thinking (losing job, health)
  - Helplessness/hopelessness
  - Performance anxiety

# CBT-I IS HIGHLY EFFECTIVE IN MANY POPULATIONS

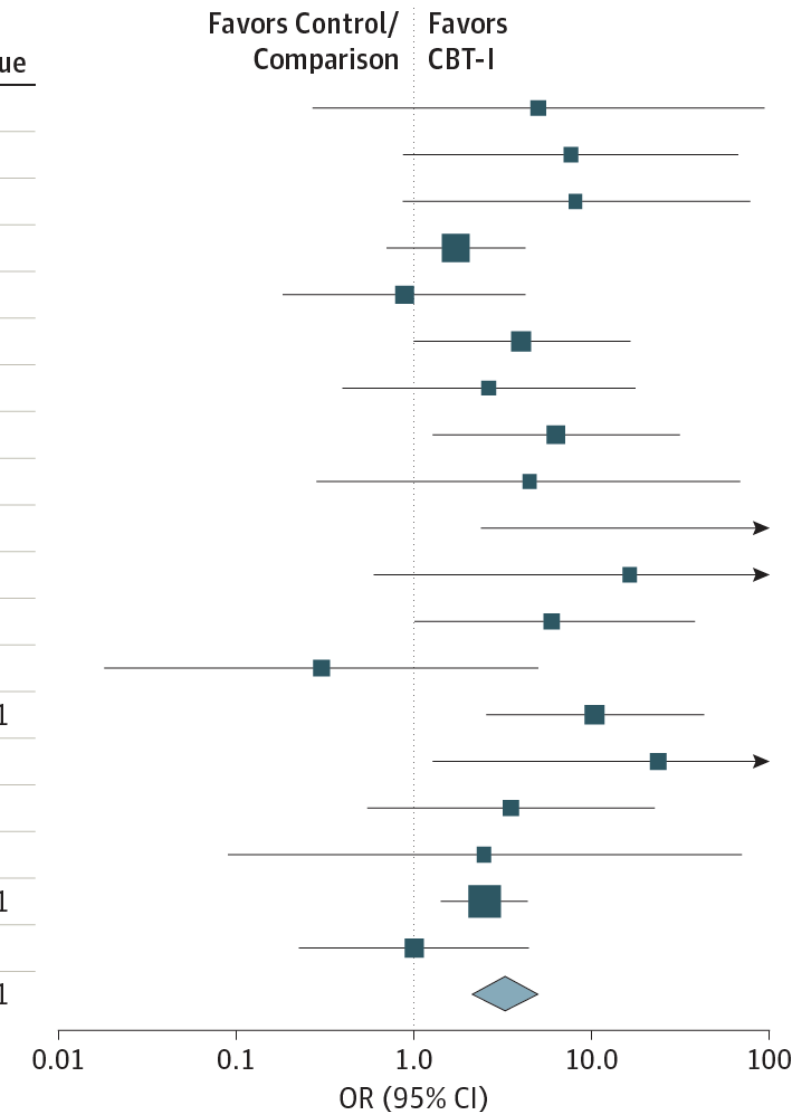
- Effects are comparable to hypnotic medications and longer lasting, preferred by patients
- Moderate to large effect size
  - Sleep latency (Cohen's  $d = -0.52$ )
  - Sleep quality (Cohen's  $d = 0.89$ )
  - Wakefulness after sleep onset (Cohen's  $d = -0.57$ )
  - Sleep efficiency (Cohen's  $d = 1.00$ )
  - Total sleep time (adults Cohen's  $d = 0.42$ ).



# CBT-I EFFECT SIZE: COMORBID INSOMNIA

## 36 VS 17% REMISSION

Source	OR	Statistics for Each Study			
		OR	95% CI	z Value	P Value
Alcohol dependence: Arnedt et al, <sup>25</sup> 2011	ISI	5.00	0.27-91.52	1.09	.28
Chronic pain: Currie et al, <sup>40</sup> 2000	PSQI	7.56	0.87-65.87	1.83	.07
Alcohol dependence: Currie et al, <sup>26</sup> 2004	PSQI	8.14	0.88-75.48	1.85	.06
Breast cancer: Dirksen and Epstein, <sup>37</sup> 2008	ISI	1.73	0.71-4.17	1.21	.22
Mixed psychiatric: Edinger et al, <sup>27</sup> 2009	PSQI	0.88	0.19-4.16	-0.16	.87
Hearing impairment: Jansson-Frajmark, <sup>45</sup> 2012	ISI	3.96	0.97-16.27	1.91	.06
COPD: Kapella et al, <sup>47</sup> 2011	PSQI	2.63	0.39-17.46	1.00	.32
Depression: Manber et al, <sup>28</sup> 2008	ISI	6.26	1.27-30.80	2.26	.02
PTSD: Margolies et al, <sup>29</sup> 2013	Combined	4.45	0.29-67.55	1.07	.28
Chronic pain: Pigeon et al, <sup>24</sup> 2012-1	ISI	143.00	2.42-8467.01	2.38	.02
Chronic pain: Pigeon et al, <sup>24</sup> 2012-2	ISI	16.20	0.59-441.68	1.65	.10
Cancer: Ritterband et al, <sup>52</sup> 2012	ISI	6.00	0.97-37.30	1.92	.05
PD: Rios Romenets et al, <sup>53</sup> 2013	ISI	0.30	0.02-4.91	-0.84	.40
Breast cancer: Savard et al, <sup>56</sup> 2005	ISI	10.38	2.55-42.33	3.26	<.001
PTSD: Talbot et al, <sup>31</sup> 2014	ISI	23.57	1.29-430.80	2.13	.03
Chronic pain: Tang et al, <sup>57</sup> 2012	ISI	3.50	0.55-22.30	1.33	.18
PTSD: Ulmer et al, <sup>32</sup> 2011	ISI	2.48	0.09-68.14	0.54	.59
Osteoarthritis: Vitiello et al, <sup>58</sup> 2013	Combined	1.00	1.43-4.30	3.22	<.001
Depression: Wagley et al, <sup>33</sup> 2012	PSQI	3.17	0.23-4.37	0.00	>.99
			2.09-4.83	5.40	<.001



## 4. PRIMARY CARE “FRIENDLY” TREATMENT: BRIEF BEHAVIORAL THERAPY FOR INSOMNIA (BBTI)

1. Spend only the number of hours in bed that you are sleeping
2. Don't get into bed unless sleepy
3. Don't stay awake in the night
4. Get up at the same time each morning

Troxel et al., 2009

# HOW YOU CAN START BEHAVIORAL INSOMNIA INTERVENTIONS

- Optimize chronic medical and psychiatric dx
- Assess patient preferences
- Assess for comorbid sleep disorders
- **Use a sleep diary**
- Assess response/adherence to BSM interventions within 1-2 weeks

# THINGS THAT YOU SHOULD **NOT** DO

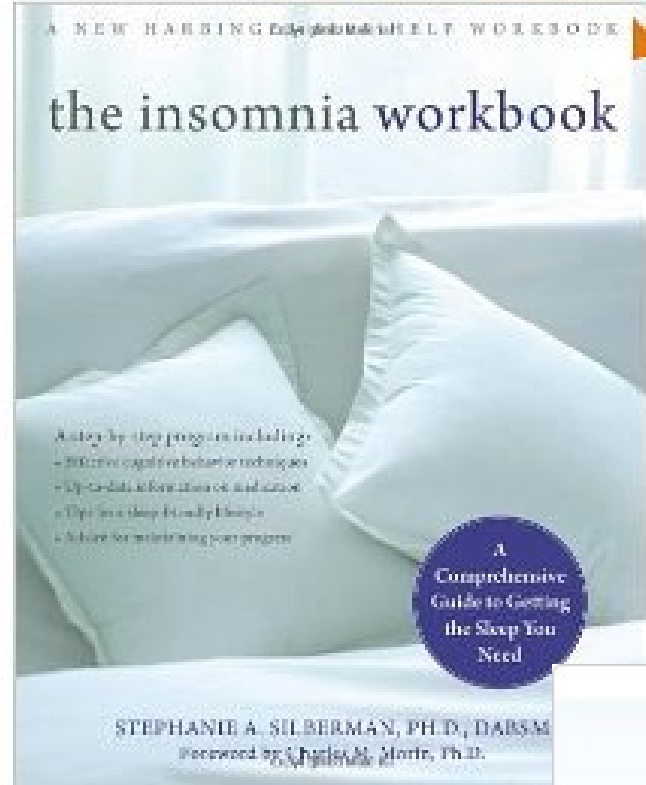
- X Refer patients with insomnia for a sleep study (if not otherwise indicated, such as sleep apnea)
- X Provide only a handout
- X Provide hypnotics without discussing patient preferences, side effects and planned duration of therapy

# WHO SHOULD BE DIRECTLY REFERRED TO BSM?

- No clear answer but some suggestions
  - Insomnia complaint >1 month
  - Hypnotic medication not working well
  - Hypnotics working well but open to trying to taper
  - Someone who is at least willing to explore the option of behavioral treatment

# PATIENT RESOURCES

Click to **LOOK INSIDE!**



A NEW HARBINGER SELF-HELP WORKBOOK

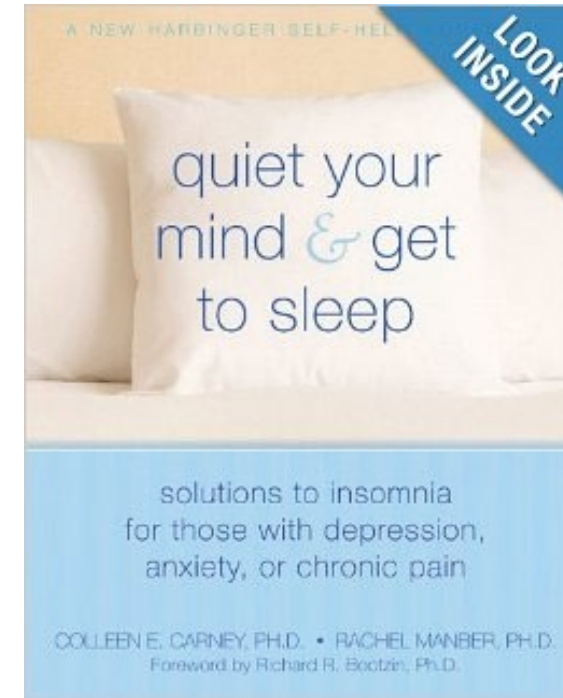
## the insomnia workbook

Activities, step programs including:  
- Effective cognitive behavioral techniques  
- Up-to-date information on medications  
- Tips for a sleep-friendly lifestyle  
- Advice for maintaining your progress

**A Comprehensive Guide to Getting the Sleep You Need**

STEPHANIE A. SILBERMAN, PH.D., DABSM  
Foreword by Charles M. Morin, Ph.D.


A NEW HARBINGER SELF-HELP WORKBOOK



## quiet your mind & get to sleep

solutions to insomnia for those with depression, anxiety, or chronic pain

COLLEEN E. CARNEY, PH.D. • RACHEL MANBER, PH.D.  
Foreword by Richard B. Bootzin, Ph.D.



## Could Sleepio help you? Meet The Prof and find out

[Meet The Prof](#)

# SUMMARY

- You **CAN** diagnose insomnia use behavioral sleep medicine techniques in your clinic
- You **CAN** directly refer to behavioral sleep medicine
- You **CAN** authorize to taper

# THANK YOU

- [Kelly.baron@Utah.edu](mailto:Kelly.baron@Utah.edu)