TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™
EL PASO
Office *of* Faculty Affairs
Faculty Wellness Program

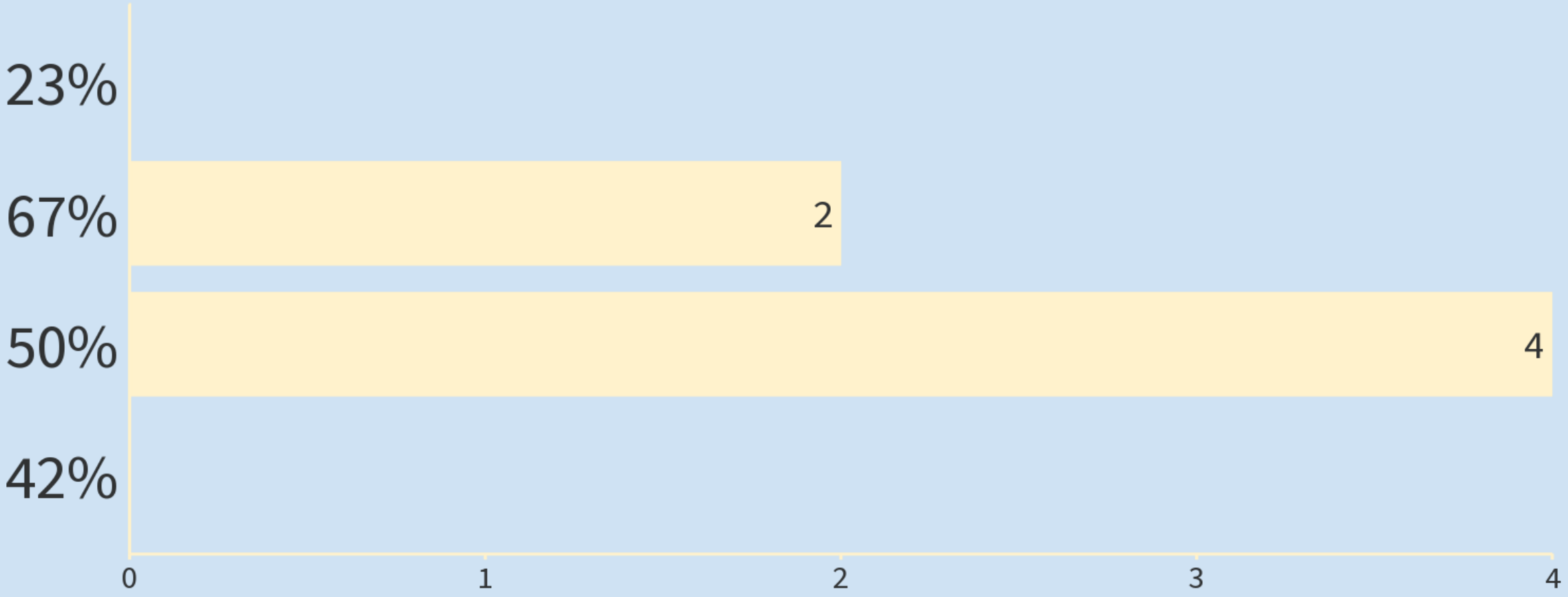
David F. Briones, M.D., DLFAPA
Director, Faculty Wellness Program
Professor of Psychiatry

A Wellness Approach to Addressing Insomnia

Learning Objectives

- To understand the clinical aspects of insomnia.
- To differentiate insomnia from related sleep disorders.
- To discuss treatment options for the management of insomnia.
- To emphasize the non-pharmacological approach to the management of insomnia.

What percentage of faculty are NOT getting 7 or more hours of sleep a night?



Total Results: 6

The Impact of SARS-COV 2 on Sleep

1. Insomnia- with or without history of insomnia
2. Reasons for insomnia include increased anxiety levels, caffeine use, alcohol consumption and increased screen time (blue light exposure).
3. Circadian pattern changes (especially sleep phase delays).
   - Also, increased daytime napping leading to altered nocturnal sleep cycle.
4. Increased drug usage

Source: Javaheris and Javaherish. 2020

Insufficient Sleep and Dementia

- A study of nearly 8,000 people used a 25 year follow-up
- Individuals ages 50, 60 or 70 were 30% more likely to be diagnosed with dementia in later life if they reported sleeping 6 hrs. or less compared to those who regularly slept 7 hrs.

Source: Sabia S., et al. Nature Commun. 2021

Insomnia: Negative Associations

1. Insomnia is commonly associated with medical, neurological or psychiatric co-morbidity (cardiovascular disease, GI disorders, Parkinson's, chronic pain, breathing problems, depression, and anxiety disorders, to name a few). (Sarsour K, et al., Sleep Medicine, 2008)

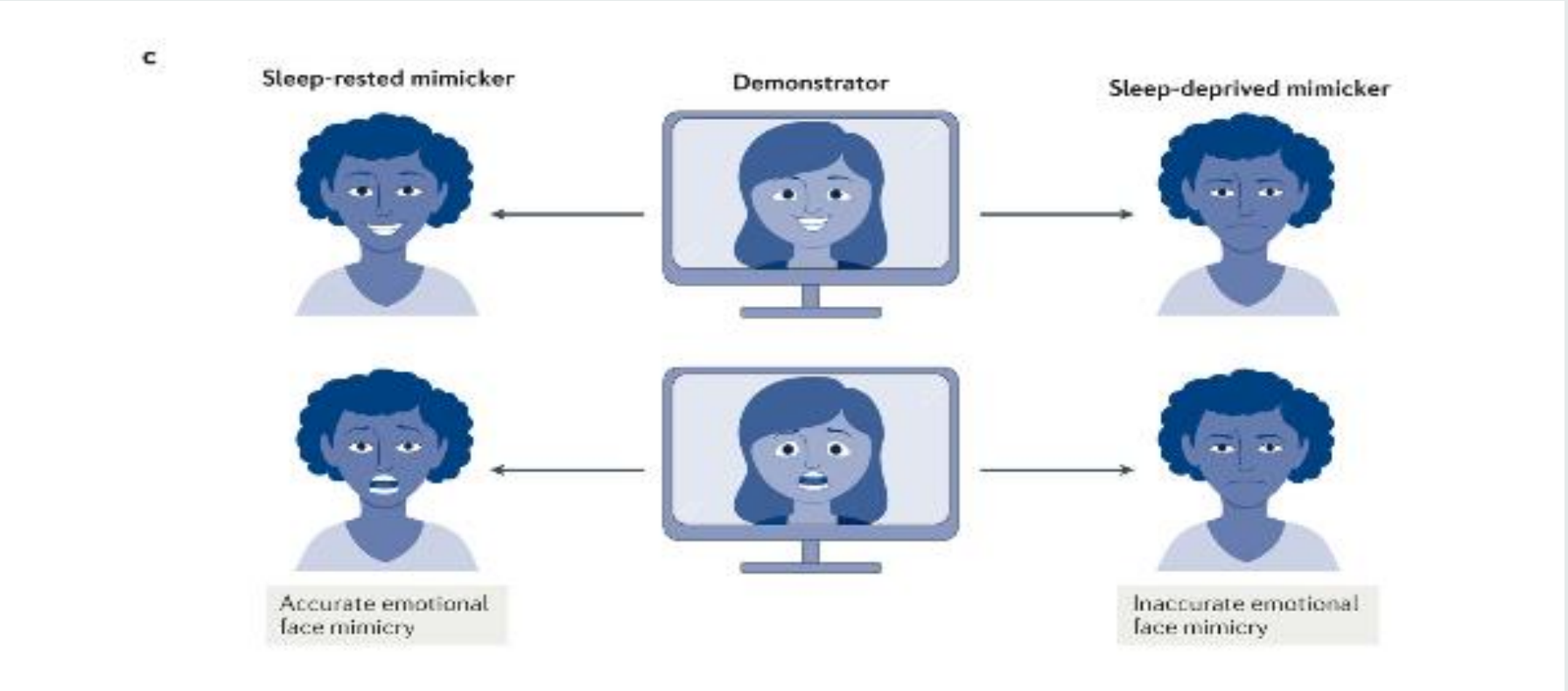
2. Likely relationship with dysregulation of the HPA, increased sympathetic nervous system activity and increased inflammation. (Javaheri S., Redline S., Chest. 2017)

Sleeping in Doesn't Mitigate Metabolic Changes Linked to Sleep Deficit

- Recent study in Current Biology compared 3 groups of healthy normal weight adults (18-39 yrs.).
- Control group slept up to 9 hours per night for 9 nights.
- Sleep restriction group without weekend recovery sleep had up to 5 hrs. sleep per 9 nights.
- Sleep restriction group with weekend recovery sleep had 5 hrs. of sleep per week night, unrestricted sleep on weekend, followed by another 2 week nights of sleep restriction.
- **Notable findings included rapid diet and metabolic changes in the sleep deprived groups (decreased insulin sensitivity, increased caloric intake and weight gain).**
- **Assessment: Sleep debt consequences probably cannot be fully corrected by weekend compensation.**

Ref: Rubin, R. *JAMA. 2019*

Sleep Loss and Aversive Processing



Ref: Krause, Simon, et al. The Sleep-Deprived Human Brain. *Nat Rev Neurosci*. 2017

What is Insomnia?

Insomnia

1. Subjective complaints: Difficulty in initiating and/or maintaining sleep (DIMS)

2. Association with the day time sx.,including fatigue, decreased work performance, decreased interest in socialization and depressed mood.

3. Poor quality of life at least 3x/week for a minimum of 3 months.

Source: International Classification of Sleep Disorders (3rd ed.) 2014

Dr. T

Typical Case of Insomnia

Dr. T is a 45 yr. old physician with a productive work and family life, with no medical or psychiatric problems.
After a particularly difficult set of calls about 8 months ago, Dr. T soon developed problems falling asleep and waking up several times per night, most days of the week. Dr. T usually tossed and turned for about an hour before falling asleep, and woke up 2-3 times during the night, again tossing in bed for more than 30 minutes before falling asleep. Hours of sleep became erratic, and work productivity was decreased with reduced concentration ability and daytime fatigue.

Insomnia Severity Index

Insomnia Problems	None	Mild	Moderate	Severe	Very Severe
Difficulty falling asleep	0	1	2	3	4
Difficulty staying asleep	0	1	2	3	4
Problems waking up too early	0	1	2	3	4

How SATISFIED/DISSATIFIED are you with your CURRENT sleep pattern?				
Very Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Very Dissatisfied
0	1	2	3	4

How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life?				
Not at all Noticeable	A Little	Somewhat	Much	Very Much Noticeable
0	1	2	3	4

How WORRIED/DISTRESSED are you about your current sleep problem?				
Not at all Worried	A Little	Somewhat	Much	Very Much Worried
0	1	2	3	4

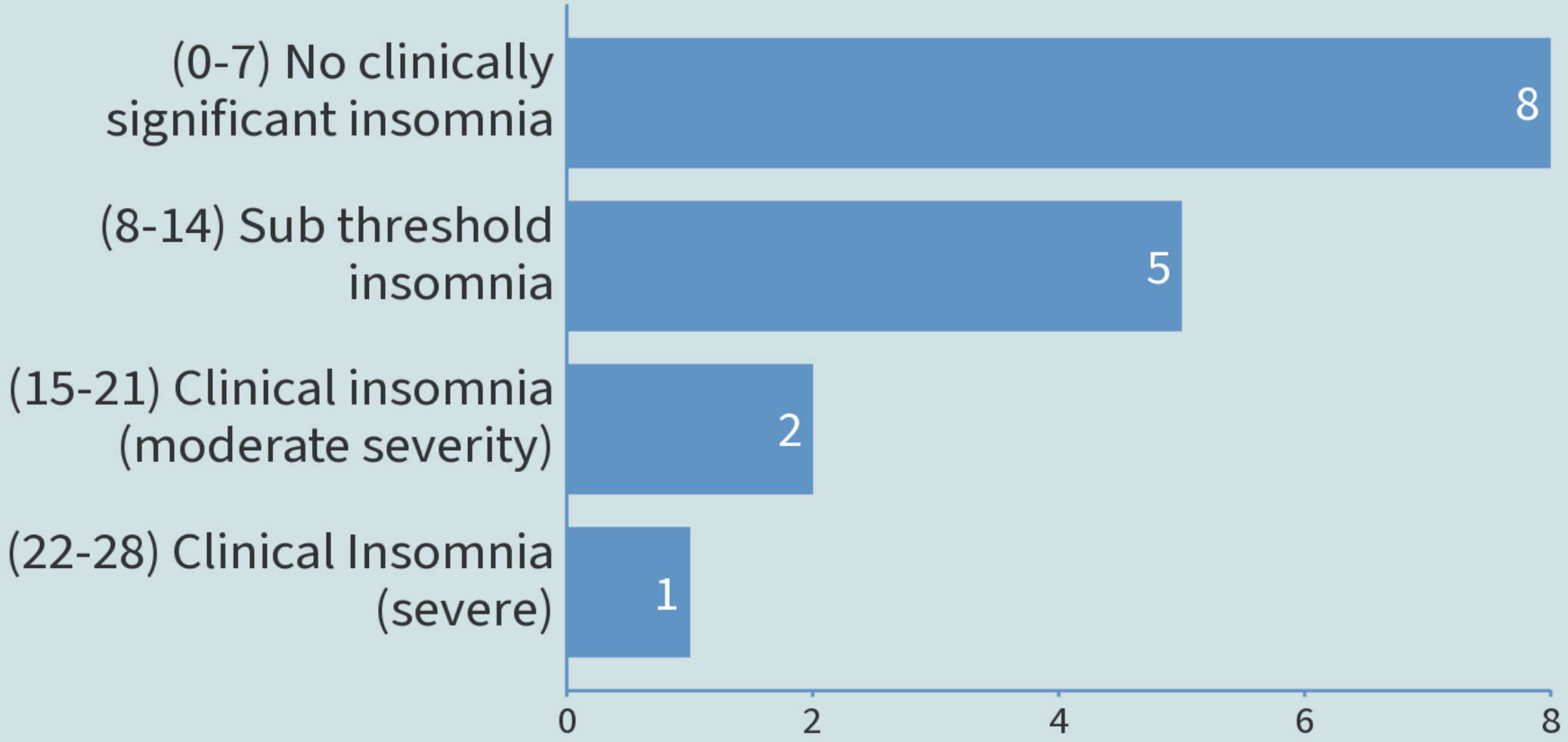
To what extend to you consider your sleep problem to INTERFERE with your daily functioning (e.g., daytime fatigue, mood, ability to function at work/daily chores, concentration, memory, etc.) CURRENTLY?				
Not at all Interfering	A Little	Somewhat	Much	Very Much Interfering
0	1	2	3	4

Add the scores for all seven items

Total Score	Categories
0-7	No clinically significant insomnia
8-14	Sub threshold insomnia
15-21	Clinical insomnia (moderate severity)
22-28	Clinical insomnia (severe)

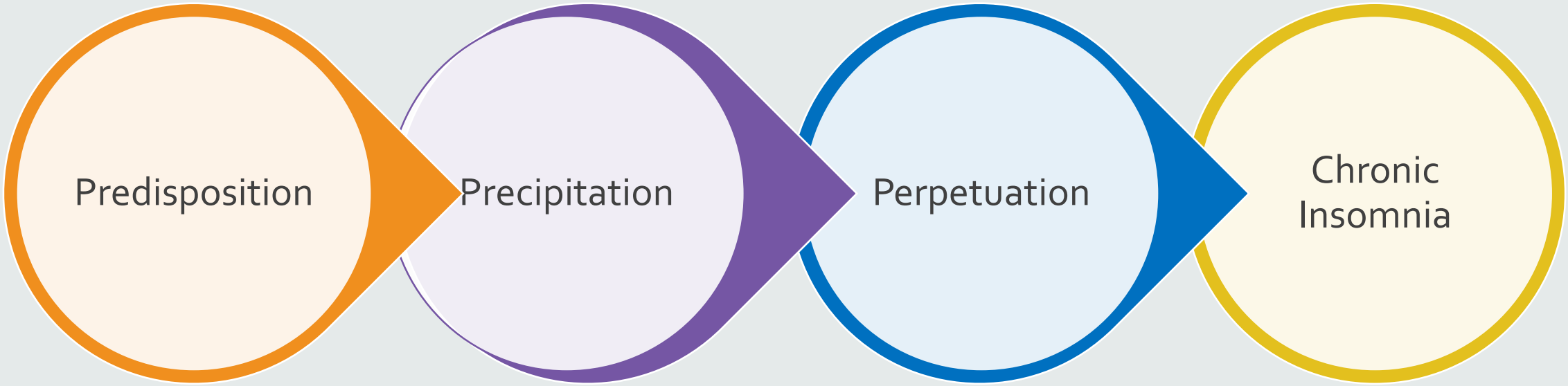
Source: www.myhealth.va.gov with permission from Charles M. Morin, Ph.D. Universite' Laval

How did you score on the Insomnia Severity Index?



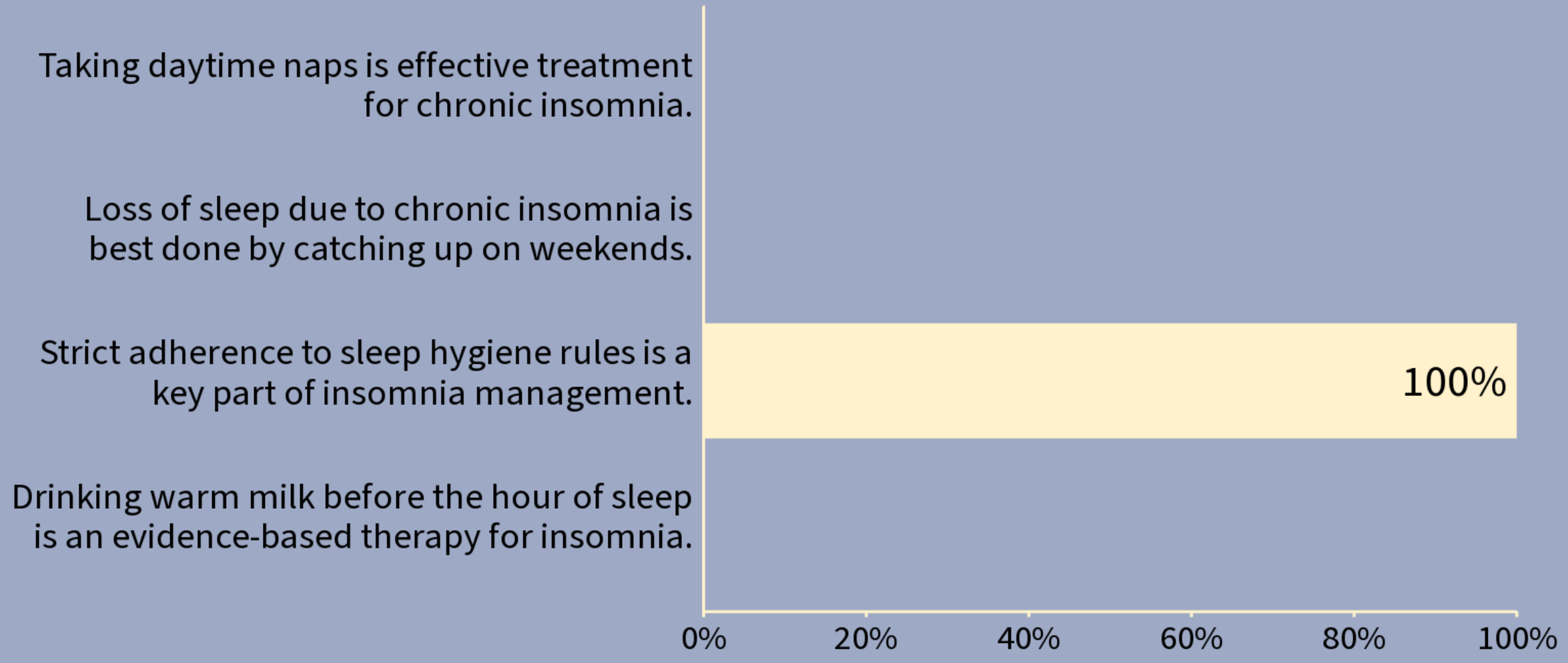
Total Results: 16

What are the three P's of Chronic Insomnia?



Spielman A, Caruso L, Glovinsky P. A behavioral perspective on insomnia treatment. Psychiatr Clin North Am 1987;10:541-553.

Which of the following is a true statement?



Total Results: 1

Myths about Sleep

- “I can get by with 5 hours of sleep”.
- “Snoring is not harmful, as long as it doesn’t wake you or others up”.
- “I recover (sleep deficit) by sleeping in on weekends”.
- “Women sleep better than men”.
- “All I need is a cup of coffee and I’ll be fine”.
- “A two hour nap will solve everything”.
- “Melatonin is a good hypnotic”.
- “Over the counter sleeping pills are effective”.

A Biopsychosocial Approach to the Treatment of Insomnia

Finan and coworkers referenced the literature supporting a biopsychosocial approach to insomnia, even when associated with complex interfering factors, such as chronic pain.

Source: Finan PH, et al. J Pain. 2013

A Biopsychosocial Approach to the Treatment of Insomnia

Diagnosis of Chronic Insomnia

- History and physical, including drug/alcohol use history.
- Diagnosis and treatment of underlying contributing conditions (medical – neurological – psychiatric)
- Breathing related sleep disorders – especially obstructive sleep apnea – and periodic limb movement disorder (nocturnal myoclonus) are common and require polysonnography (PSG) in a sleep lab.
- Circadian Rhythm Disorders can mimic insomnia

A Biopsychosocial Approach to Insomnia Management

- Treatment underlying comorbidities 1st (e.g., chronic pain conditions)
- Consider medication as adjunctive or alternative to gold standard – CBT-I
- Pharmacological management (not the focus of our discussion) can be useful to help initiate the sleep cycle and provide guidance in the behavioral management of insomnia

Wellness Behaviors and CBT-I

Cognitive behavioral therapy for insomnia (CBT-I) is the gold standard for the treatment of insomnia.

- CBT-I utilizes a foundation of healthy behaviors, such as:
  - Enhancing good coping skills by identification and awareness of unhealthy practices or a sleep disruptive environment.
  - Enhancing resilience by strengthening stress management tools.
  - Sleep hygiene and it's biopsychosocial underpinnings, including diet and exercise.

CBT-I Works

ACP American College of Physicians®
Leading Internal Medicine, Improving Lives

CLINICAL GUIDELINE

Management of Chronic Insomnia Disorder in Adults: A Clinical Practice Guideline From the American College of Physicians

Amir Qaseem, MD, PhD, MHA; Devan Kansagara, MD, MCR; Mary Ann Forciea, MD; Molly Cooke, MD; and Thomas D. Denberg, MD, PhD; for the Clinical Guidelines Committee of the American College of Physicians*

Description: The American College of Physicians (ACP) developed this guideline to present the evidence and provide clinical recommendations on the management of chronic insomnia disorder in adults.

Methods: This guideline is based on a systematic review of randomized, controlled trials published in English from 2004 through September 2015. Evaluated outcomes included global outcomes assessed by questionnaires, patient-reported sleep outcomes, and harms. The target audience for this guideline includes all clinicians, and the target patient population includes adults with chronic insomnia disorder. This guideline grades the evidence and recommendations by using the ACP grading system, which is based on the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach.

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;165:125-133. doi:10.7326/M15-2175 **www.annals.org**
For author affiliations, see end of text.
This article was published at www.annals.org on 3 May 2016.

Psychosocial and Behavioral Therapies for Insomnia

CBT-I combines the following techniques:

- Sleep hygiene/education of chronophysiology
- Relaxation therapy
- Stimulus control therapy
- Cognitive therapy
- Sleep restriction therapy

Source: Morin CM, Benca R., Lancet, 2012

Good Sleep Hygiene

DO:
1. Go to bed and get up at the same time. Try to maintain something close to this on weekends.
2. Get regular exercise each day, preferably in the morning (evidence that exercise (including stretching/aerobic) improves restful sleep.
3. Get regular exposure to outdoor or bright light, especially in the afternoon.
4. Keep temperature in your bedroom comfortable.
5. Keep bedroom quiet and dark enough to facilitate sleep
6. Use your bed only for sleep (and sexual activity).
7. Establish a regular, relaxing bedtime routine. (ex: warm bath/shower, aromatherapy, reading, music).
8. Use a relaxation exercise before going to sleep or relaxing imagery.
9. Keep your feet and hands warm. Wear warm socks to bed.
10. Designate another time to write down problems and possible solutions (ex: late afternoon/early evening).

Poor Sleep Hygiene

DONT:	
1. Exercise before going to bed.	8. Take daytime naps (No longer than 20 minutes).
2. Engage in stimulating activities just before bed.	9. Command yourself to go to sleep.
3. Have caffeine in the evening (coffee, teas, etc.)	10. Watch the clock or count minutes.
4. Read or watch television in bed.	11. Lie in bed awake more than 20-30 minutes.
5. Use alcohol to help you sleep.	12. Succumb to maladaptive thoughts.
6. Go to bed to hungry or to full.	13. Change your daytime routine the next day if you didn't sleep well.
7. Take another persons sleeping pills.	14. Increase caffeine intakes the next day.

Sleep Hygiene

Environmental bedroom control:

- Allow body temperature to drop: lower the thermostat
- Dark bedroom helps rising melatonin
- Quiet environment- can be helped with sleep inducing sounds/music (free android and IPhone aps available)

Daytime Habits:

- Exercise and diet: not to close to bedtime!
- Avoid stimulants (coffee, tea, alcohol) after 2:00pm
- NAPS – avoid at 1st, then take circadian (short) naps between 1-4:00pm
- Winding down activities before sleep, beginning 2 hrs. before bedtime

Modified from: Morin CM, Benca R., Lancet, 2012

CBT-I Tools

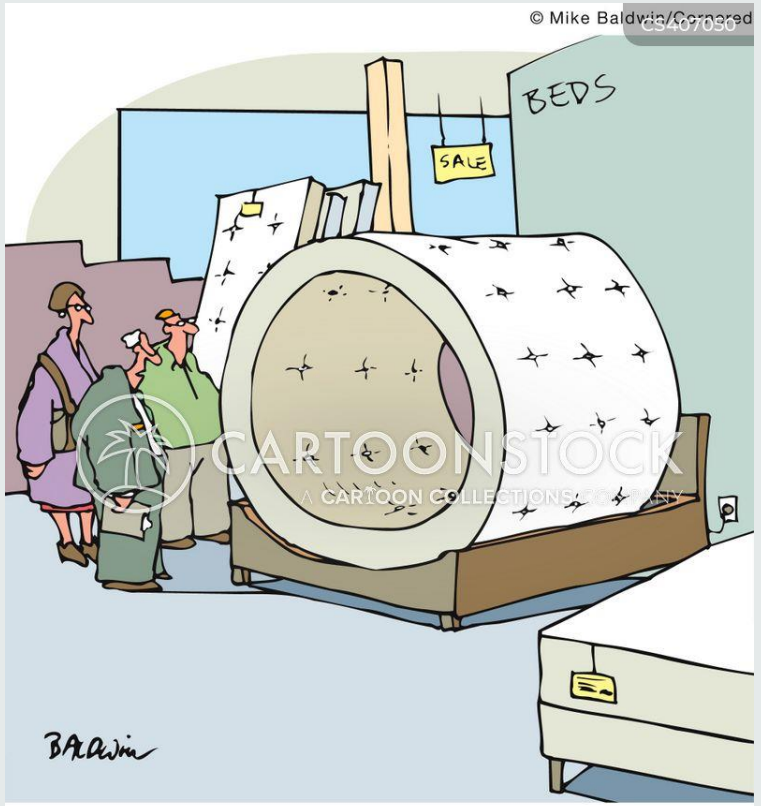
- **Cognitive therapy:** Restructure thought patterns that put pressure on yourself to sleep “I’ll feel terrible tomorrow and I have a busy day.” Using paradoxical intention is one tool used in this regard.
- **Relaxation methods** (most people with insomnia are overstimulated at bedtime.)
- **Enhance coping tools like:**
  - Deep muscle relaxation
  - Mindful meditation
  - Stress management
  - Reinforcing progress with sleep diary

Modified from: Morin CM, Benca R., Lancet, 2012

CBT-I Tools

Stimulus Control: Use bed only for sleep (exception – sex)

- No TV in the bedroom
- Bed is not the place for problem solving, negative memories, tasks, or planning for tomorrow
- Connect bed with sleep: This is the key to a critical physiological signaling.
- No tossing and turning in bed



"This one's good if you like to toss and turn all night."

Modified from: Morin CM, Benca R., Lancet, 2012

CBT-I Tools

Sleep Restriction

- Unlike other CBT-I techniques, this more often requires the assistance of a trained professional
- Helps the patient to spend less time awake in bed
- Makes sleep cycle deeper and more regular
- Requires initial limitation of time in bed, with increasing time in bed as sleep becomes more efficient.

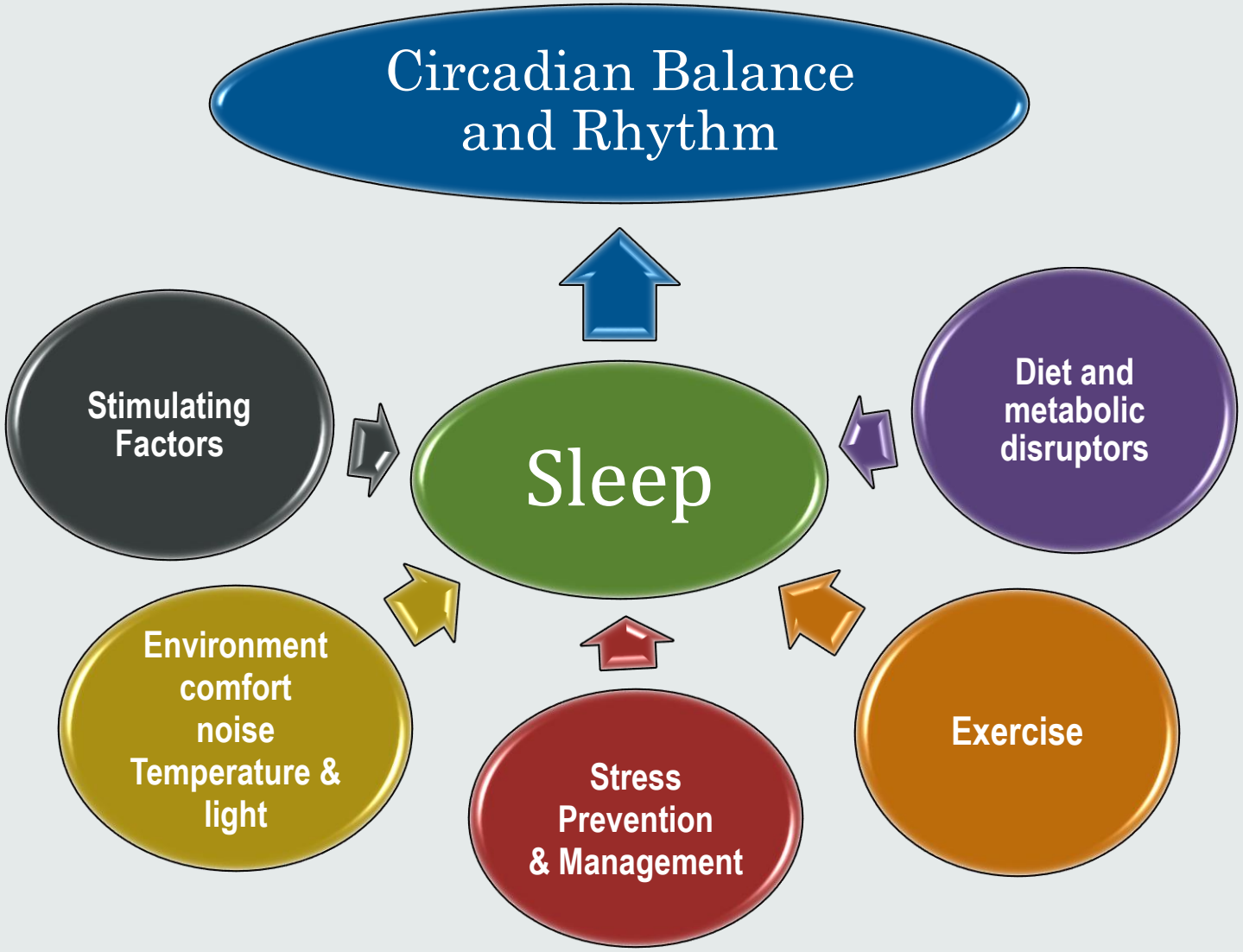
Modified from: Morin CM, Benca R., Lancet, 2012

CBT-I can be self taught, especially

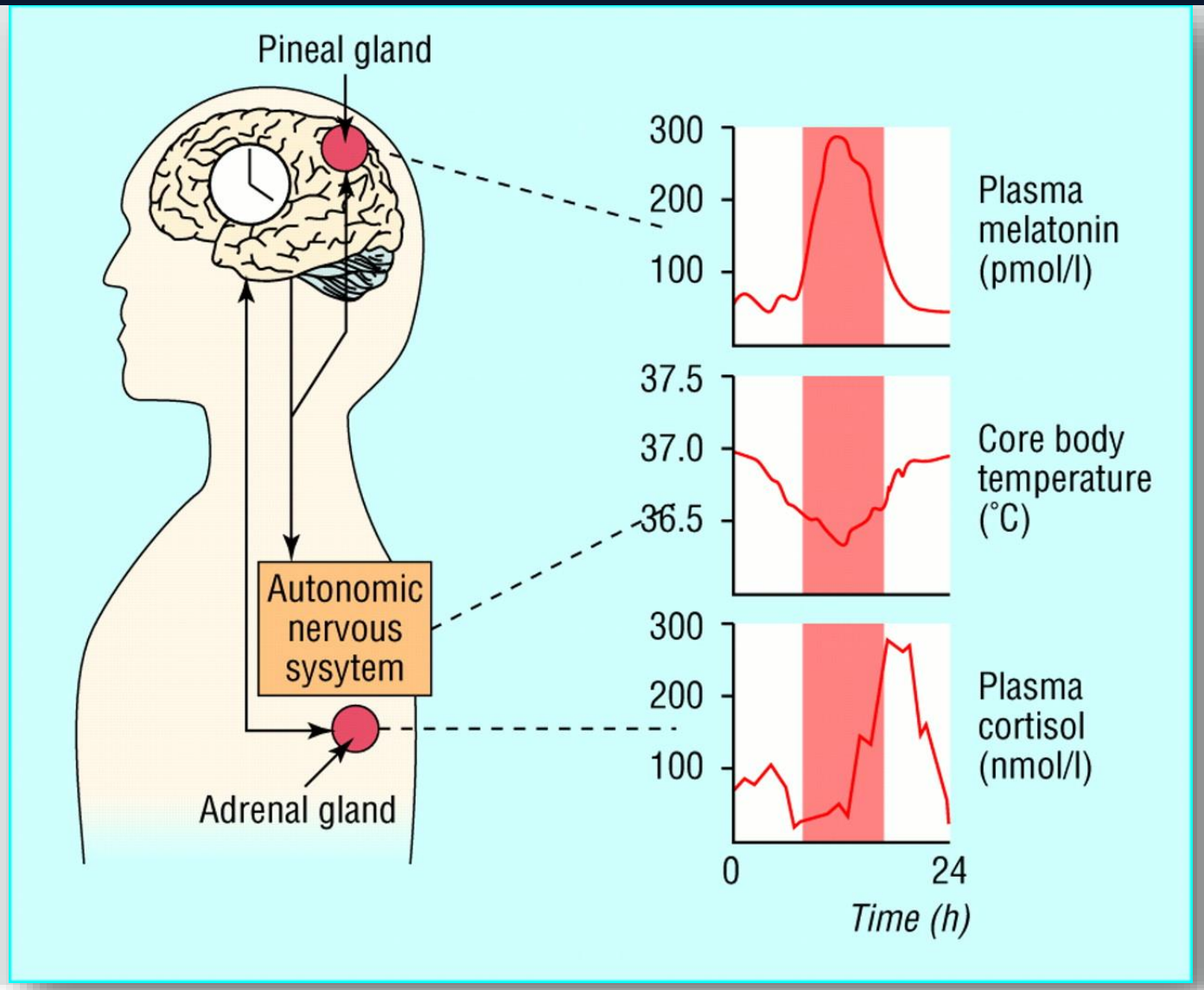
- Sleep hygiene
- Chronophysiology education
- Relaxation Techniques
- Stimulus control
- Various aps are available for self learning or assistance from professionals.

Modified from: Morin CM, Benca R., Lancet, 2012

Chronophysiology of Sleep



Circadian Physiology



Dr. T

Typical Case of Insomnia

Dr. T is a 45 yr. old physician with a productive work and family life, with no medical or psychiatric problems.

After a particularly difficult set of **calls** about 8 months ago, Dr. T soon developed problems falling asleep and **waking up several times per night,** most days of the week. Dr. T usually **tossed and turned** for about an hour before falling asleep, and woke up 2-3 times during the night, again **tossing in bed** for more than 30 minutes before falling asleep. Hours of sleep became erratic, and work productivity was decreased with reduced concentration ability and daytime fatigue.

Wellness Prescription for Dr. T

Education regarding chronophysiology

Strict sleep hygiene, emphasizing:

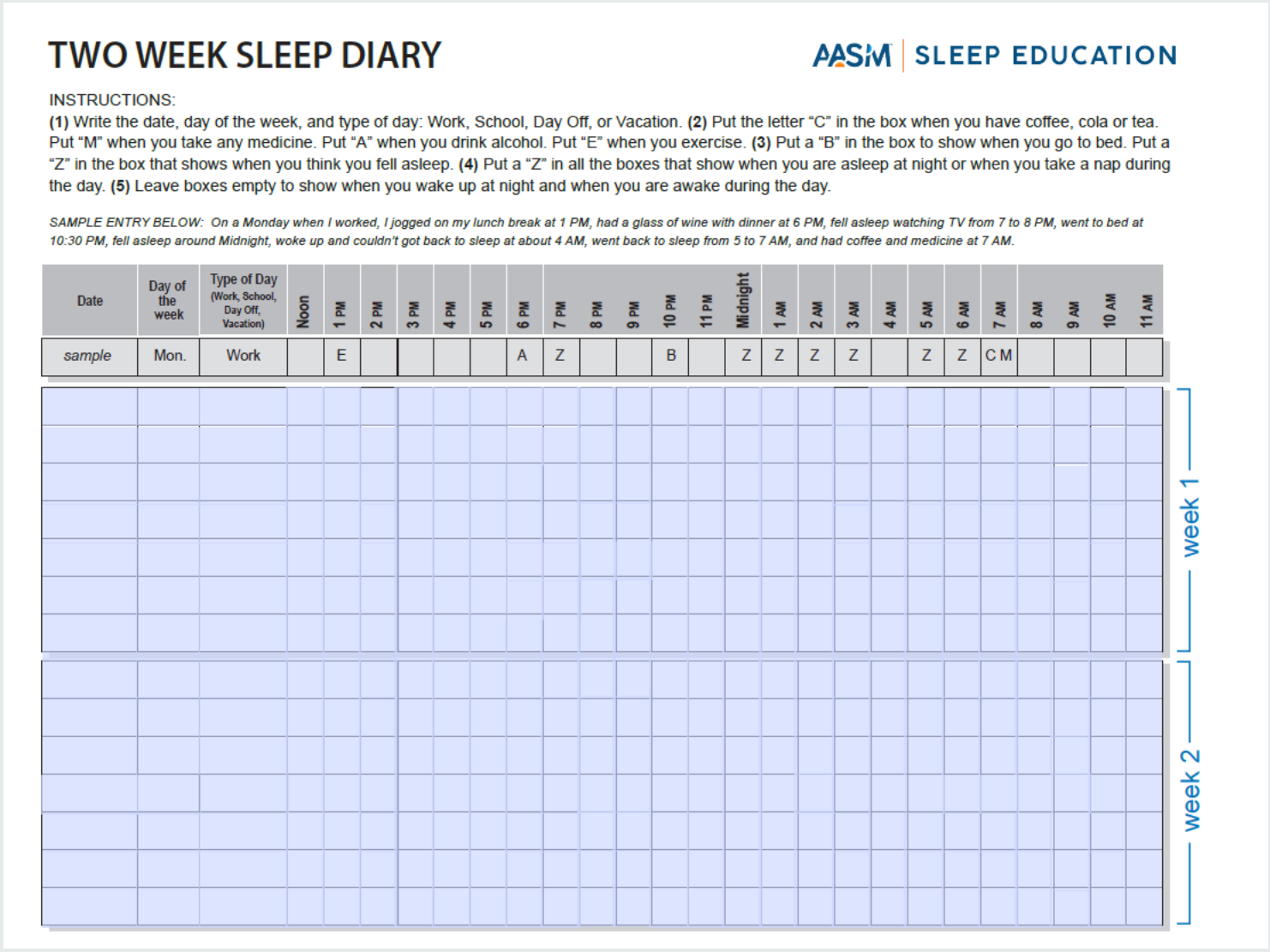
- Wake up at the same time, 7 days a week
- No daytime naps until sleep cycle is corrected
- Pre-sleep routine, including doing work/conflict task prioritization (finishing 2 hrs. before sleep) and doing relaxing rituals before sleep
- Strict environment control, including quiet, dark bedroom with no TV
- Enhance lowering body temperature: turn thermostat down
- No stimulants after 2pm

Stimulus Control

- No tossing and turning for long periods in bed → get up, go into another quiet, dark room and meditate/listen to soft music until asleep.
- No clock watching: face of clock out of sight
- Train body: when in bed I'm actually sleepy or asleep

Cognitive restructuring and reinforcement (like sleep log).

American Association of Sleep Medicine: sleep.education.org: PDF sleep diary



TWO WEEK SLEEP DIARY

AASM | SLEEP EDUCATION

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 "B" in the box to show when you go to bed. Put a "Z" in the box that shows when you think you fell asleep. **(4)** Put a "Z" in all the boxes that show when you are asleep at night or when you take a nap during the day. **(5)** Leave boxes empty to show when you wake up at night and when you are awake during the day.

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 AM.

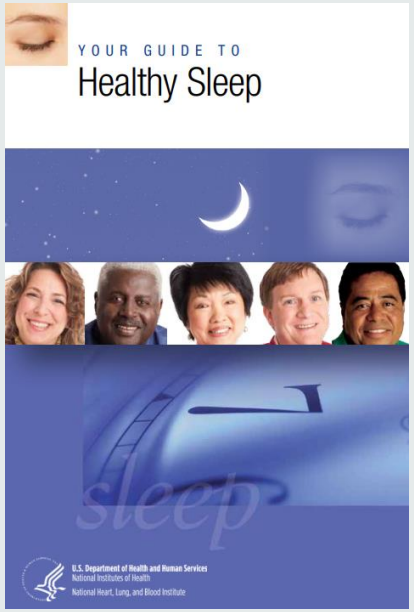
Date	Day of the week	Type of Day (Work, School, Day Off, Vacation)	Noon	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Midnight	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM
sample	Mon.	Work		E					A	Z			B		Z	Z	Z	Z		Z	Z	C M				
week 1																										
week 2																										

Sleep Diary:
Positive Reinforcement for Improvement

Self Help Materials

Your Guide to Health Sleep (NIH National Heart, Lung and Blood Institute) – 61 pages.

- Easy to read, excellent for both healthcare professionals and patients
- Covers basics physiology, sleep hygiene, different types of sleep disorders (including sleep apnea, shift work disorder tips, jet lag, etc.)
- Covers sleep myths, treatment options, detailed sleep hygiene, sleep diary.



[Your Guide to Healthy Sleep (nih.gov)]

Sleep Resources

- **American College of Physicians (Insomnia):** https://www.acponline.org/acp-newsroom/cognitive-behavior-therapy-effective-for-chronic-insomnia
- **Dr. Christine Korol** "What is Insomnia and how to cure it with Cognitive Behavior Therapy" (YouTube video)
- Your Guide to Healthy Sleep (nih.gov)

QUESTIONS

COMMENTS

© Anne Geddes

TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™
EL PASO
Office *of* Faculty Affairs
Faculty Wellness Program

David F. Briones, M.D., DLFAPA
Director, Faculty Wellness Program
Professor of Psychiatry

Thank You!