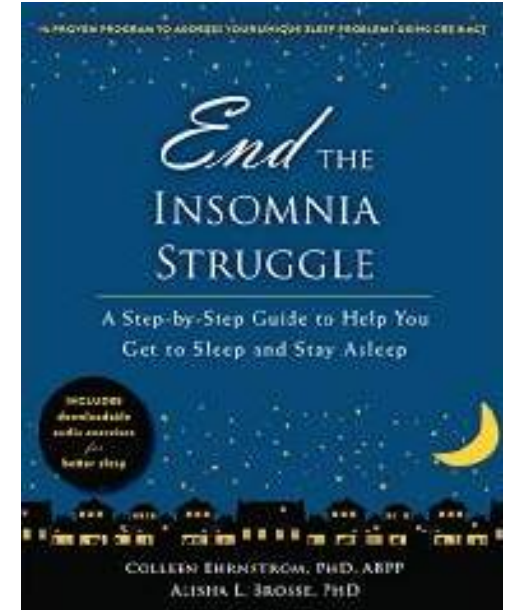


September 15, 2017 Pierre, SD

# End the Insomnia Struggle: An Individualized Approach to Treating Insomnia Using CBT-I and ACT

Alisha L. Brosse, Ph.D.  
Boulder Center for Cognitive &  
Behavioral Therapies, LLP





# Schedule

---

8:30	Assessment; acceptance
9:30	Models (psychoeducation)
10:00	Break
10:15	Behavioral interventions
11:45	Lunch
1:30	Cognitive strategies [break 2:45-
3:00]	
3:15	Sample treatment plans/Cases
4:00	State of the evidence & summary
4:30	Q&A



# Sessions 1 & 2

---

- **Assessment**
- Acceptance
- Models (Psychoeducation)



# Assessment Goals

---

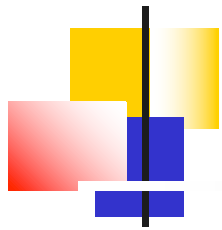
- Differential diagnosis
-



# Differential Diagnosis

---

- Insomnia
  - Difficulty initiating or maintaining sleep, or non-restorative sleep, *despite adequate opportunity*
  - Associated daytime distress or dysfunction
- Circadian Rhythm Disorders
  - Generally can sleep well, but not at desired time
  - Advanced Sleep Phase Syndrome (fast clocks; get tired early and awaken early in a.m.)
  - Delayed Sleep Phase Syndrome (slow clocks; get tired late and sleep late)



# Differential Diagnosis (cont.)

---

- Excessive Daytime Sleepiness (EDS)
  - Sleep Apnea
  - Narcolepsy
  - Periodic Limb Movements Disorder (PLMD)
  - Restless Leg Syndrome (RLS)



# Assessment Goals

---

- Differential diagnosis
- Select treatment components
- Determine sequencing
- Determine referrals for medical workup



# Assessment Tools

---

- Questionnaires
- Sleep Log
- Clinical Interview
  - Daytime CONSEQUENCES
  - THOUGHTS:
    - ♦ *“Tell me what's going on in your mind as you go to bed/awaken?”* (content and process)
    - ♦ *“How much do you think about your sleep or the consequences of your insomnia?”*
    - ♦ *“Are you anxious about sleep?”*
  - ENVIRONMENTAL factors, including bed partners
  - Typical evening/sleep/rising
  - Past/current INTERVENTIONS





# Assessment Tools (cont.)

---

- Polysomnography
- Physical with bloodwork



# Sessions 1 & 2

---

- Assessment
- **Acceptance**
- Models (Psychoeducation)



# The Message We Get (YIKES!)



**SLEEP**  
**OR DIE**



**NOT GETTING THE RIGHT AMOUNT OF SLEEP EACH NIGHT CAN HAVE  
SERIOUS HEALTH RISKS AND CAN LEAVE LONG-LASTING EFFECTS ON  
YOUR BODY AND MIND.**

**HEALTH RISKS OF NOT SLEEPING**

Taken from [yourlocalsecurity.com](http://yourlocalsecurity.com)

# Antidote: Acceptance/Willingness

## Metaphors/Exercises:

- Tug O' War
- **Gun-to-head**
- Chinese Fingertraps

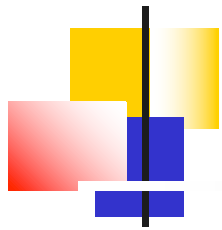




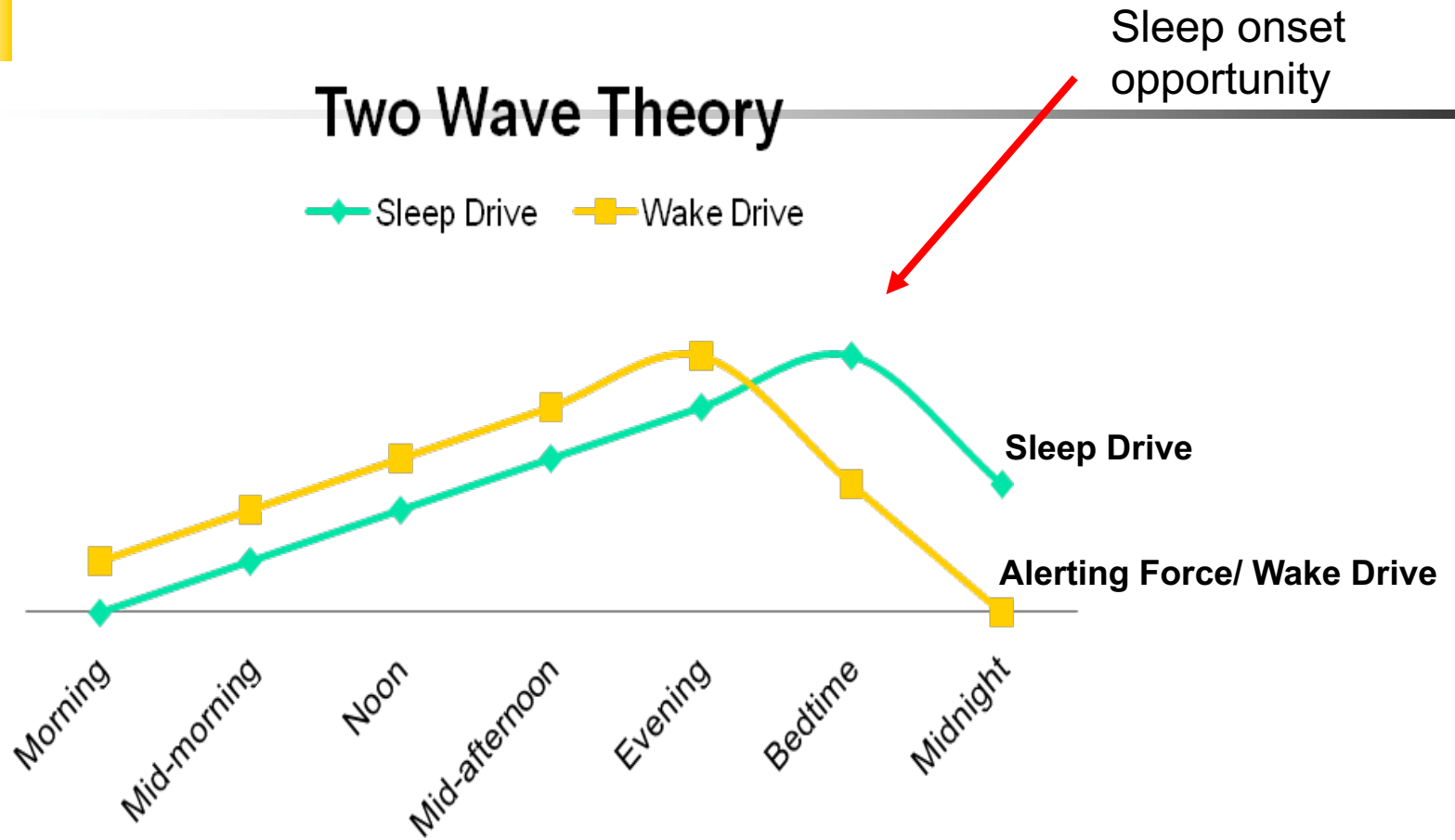
# Sessions 1 & 2

---

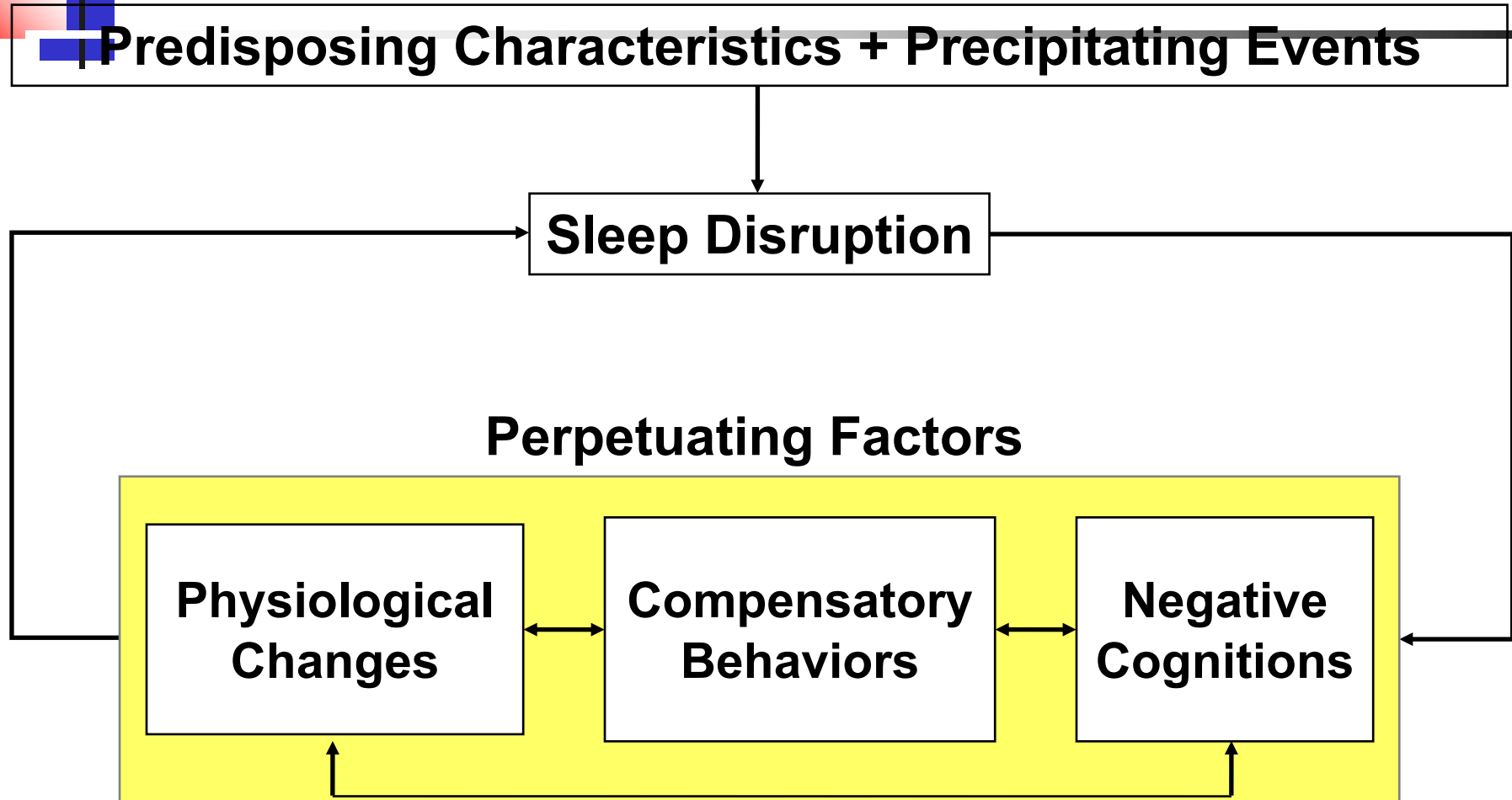
- Assessment
- Acceptance
- **Models (Psychoeducation)**



# Two Wave Theory



# 3P Model of Insomnia





# 3P Model of Sleep Disorders

(Glovinsky & Spielman, 2006)

---

- Predisposing characteristics
  - operative before sleep disorder develops
  - inherited or acquired
- Precipitating events
  - often readily identifiable and tagged as “the cause”
  - acute stress, injury, etc.
- Perpetuating attitudes and practices\*\*
  - behavioral coping strategies that go awry
  - negative thought patterns

\*\*most effective place for intervention



# Predisposing Characteristics + Precipitating Events

Sleep Disruption

## Perpetuating Factors

Physiological  
Changes

Compensatory  
Behaviors

Negative  
Cognitions

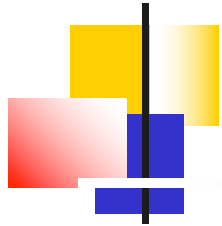
Medications

Stimulus Control  
Sleep Restriction  
Sleep Hygiene

Cogn Restructuring  
Designated Worry Time

Insomnia Intervention Key: **Medical**

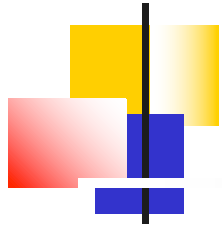
**CBT-I**



# Behavioral Strategies

---

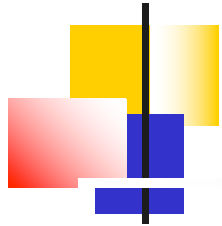
- Stimulus Control Therapy (SCT)
- Sleep Restriction Therapy (SRT)
- Sleep Hygiene
- Paradoxical Intention
- Relaxation Training



# Stimulus Control Therapy

---

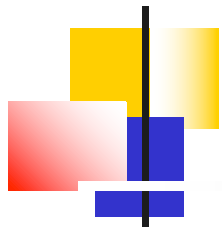
- First behavioral program developed and tested (1970s)
- Goal: retrain brain to associate bed with sleep and sex ONLY



# Stimulus Control Guidelines

---

1. Limit behavior in bed/bedroom to sleep and sex.
2. Lie down only when sleepy.
3. If, at any time during the night you are awake for more than 20 minutes, leave the bedroom and do something boring or relaxing.
4. Return to bed when sleepy. (Don't sleep elsewhere.)



# Stimulus Control Guidelines

---

5. Repeat steps 3-4 as needed.
6. Fix your wake up time – get up at the same time each morning regardless of how much sleep you got.
7. No daytime naps.



# If Only it Were So Easy....



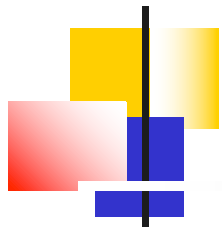
"No wonder you have insomnia . . .  
lying there awake all night."



# SCT: Implementation Tips

---

- Warn patients: they may feel worse before they feel better
- Provide a strong, credible rationale
- Develop a specific plan – write it down!
- Collect data with sleep log
- Caution: Don't use, or modify technique, if too little sleep is a trigger for major psychiatric disturbance (e.g., manic episode; psychosis)



# Sleep Restriction Therapy

---

- Prioritizes quality over quantity of sleep
- Goal: consolidate sleep



# SRT Rationale

**Predisposing Characteristics + Precipitating Events**

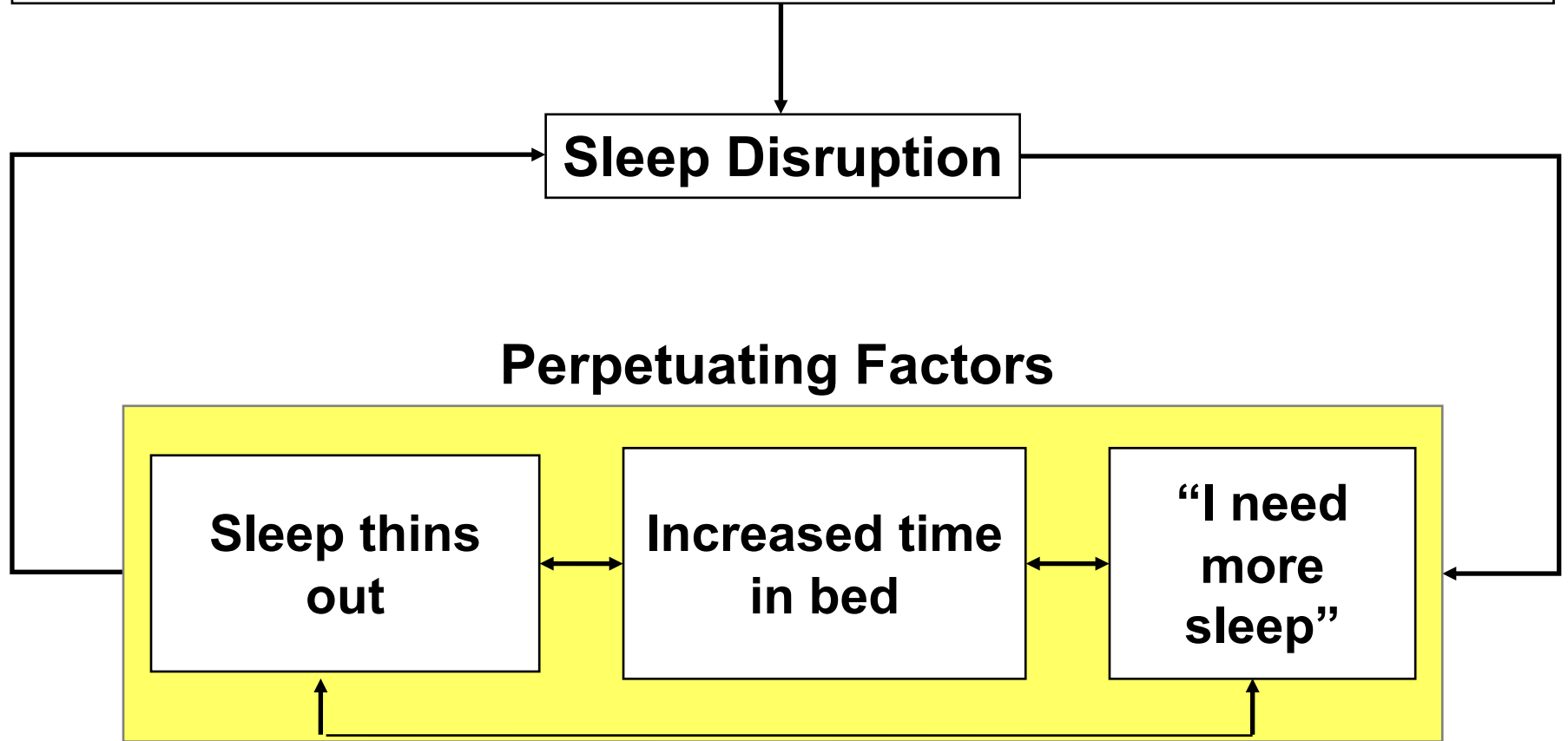
**Sleep Disruption**

**Perpetuating Factors**

**Sleep thins  
out**

**Increased time  
in bed**

**“I need  
more  
sleep”**



# Predisposing Characteristics + Precipitating Events

**Sleep Disruption**

## Perpetuating Factors

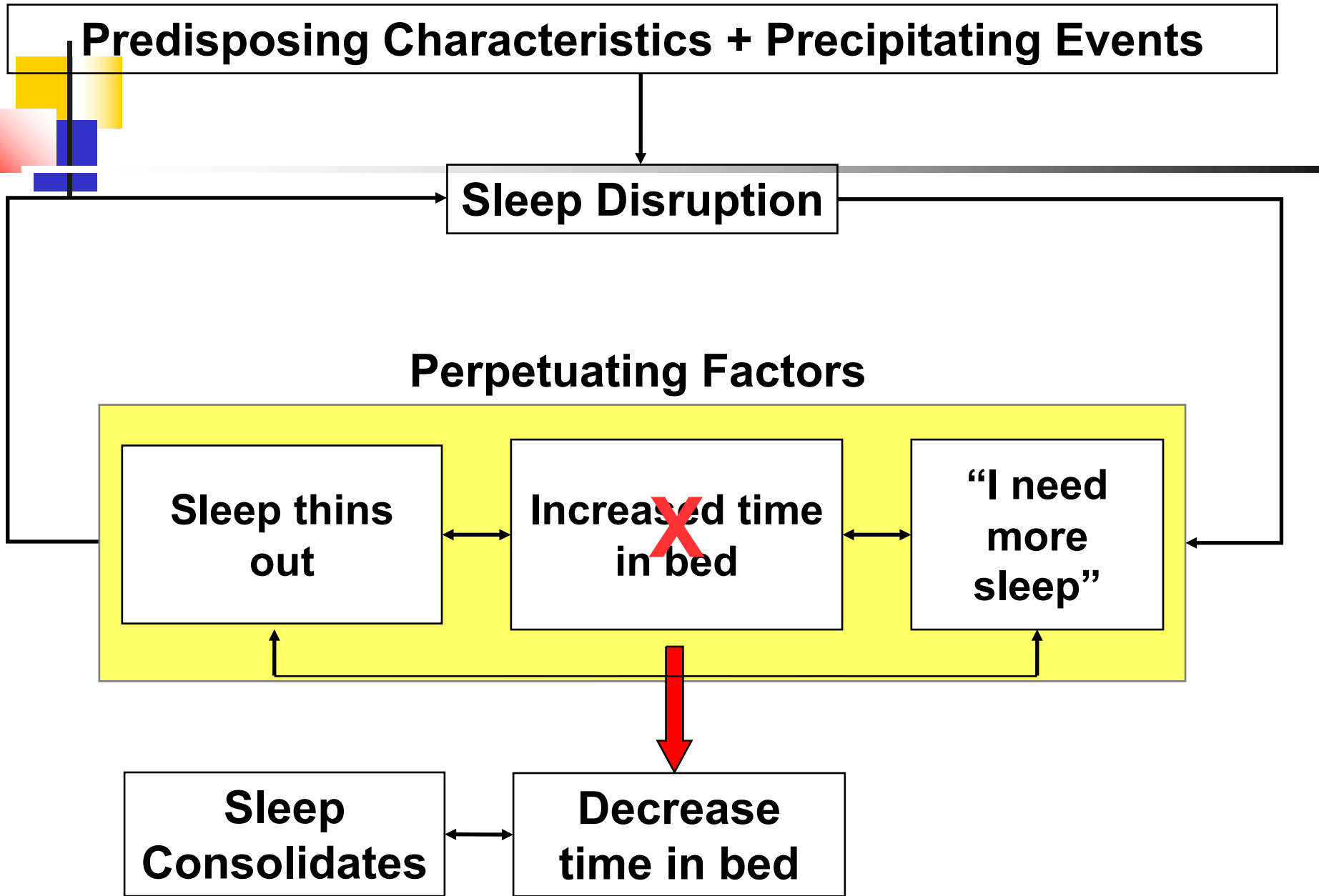
**Sleep thins  
out**

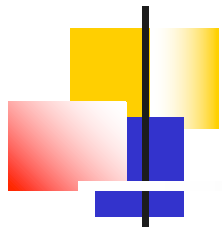
**Increased time  
in bed**

**“I need  
more  
sleep”**

**Sleep  
Consolidates**

**Decrease  
time in bed**





# Sleep Restriction Guidelines

---

1. Calculate your average total sleep time (TST), average time in bed (TIB), and sleep efficiency (SE) using sleep log data for 10-14 days.
2. Limit your time in bed to your average TST, but not less than 5 hours. To accomplish this, set a consistent bedtime and rising time
3. No daytime naps.



# Sleep Restriction Guidelines

---

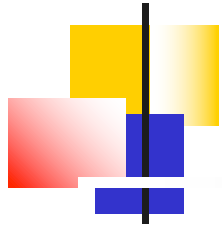
4. Adjust time in bed:
  - when 1-week avg SE is 90% or more (85% for older adults), add 15 minutes to TIB
  - if 1-week avg SE is under 85% (80% for older adults), decrease TIB to current average TST, but not less than 5 hours.
  - else, make no change.
1. Repeat step 4 until you reach target amount of sleep
2. Continue to log sleep each night



# SRT: Implementation Tips

---

- Warn patients: this likely will be painful!
- However, it's also a powerful technique
- Develop a specific plan – write it down!
- Daytime accommodations?
- Sleep log essential
- Caution: Don't use, or use more mild version, if too little sleep is a trigger for major psychiatric disturbance (e.g., manic episode; psychosis)



# Sleep Hygiene: Targets

---

## Sleep Drive and Alerting Force (2-Wave Model)

- Limit daytime naps
- Limit alcohol
- Limit stimulants
- Regular exercise
- Wind-down period
- Limit electronics near bedtime

## Environmental Factors

- Room temperature
- Light
- Noise
- Comfortable sleep surface
- Limit interference from bed partners (human, canine, feline)
- Phone - “airplane” mode or out of room



# SH: Implementation Tips

---

- Guidelines, not rules (provide rationale)
- Time lag between changing behaviors and improved sleep
- Varying levels of sensitivity (e.g., may need to abstain from alcohol and caffeine all together)
- One change may not make a noticeable difference, but changing several things may
- Collect data to evaluate impact
- Sleep hygiene  $\neq$  CBT-I! Not (usually) effective on own.



# SCT, SRT, SH... or Combo?

---

- Consider:
  - Sleep pattern: awake long enough for SCT?  
SE under 85%?
  - Contraindications: dangerous to get out of bed? Medications interfere?
  - Treatment history
  - Willingness



## Exercise 5.2 Should you use stimulus control, sleep restriction, or both?

IS ONE OR MORE OF THE FOLLOWING TRUE FOR YOU?

- sleep is fitful, restless, or unrefreshing, but you aren't actually awake
- many brief (but no prolonged) awakenings throughout the night
- injury or mobility issue that would make it very hard to get in and out of bed multiple times
- CPAP or similar device is hard to put on and off multiple times
- live in an environment not supportive of getting in and out of bed (for example, a dorm room with a roommate whose sleep would be disturbed)
- would be really anxious if you were supposed to get out of bed if not asleep within 20 minutes
- take a medication that would make it impossible or unsafe to get out of bed before morning
- have a condition (like bipolar disorder or seizure disorder) that is made worse by reduced sleep or rest

No

Yes

Can use stimulus control

Do not use stimulus control

*Can use Combination*

IS ONE OR MORE OF THE FOLLOWING TRUE FOR YOU?

- sleep more than 85% of the time in bed
- currently have some nights of adequate sleep and aren't willing to give these up
- take a medication that would make it impossible or unsafe to restrict your time in bed to the number of hours of sleep you are currently getting
- have a condition (like bipolar disorder or seizure disorder) that is made worse by reduced sleep or rest

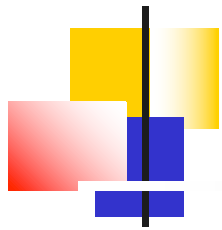
No

Yes

Can use sleep restriction

Do not use sleep restriction

*Start with cognitive strategies and/or work with a professional*



# SCT, SRT, SH... or Combo?

---

- Consider:
  - Sleep pattern: awake long enough for SCT?  
SE under 85%?
  - Contraindications: dangerous to get out of med? Meds interfere?
  - Treatment history
  - Willingness
- Small group exercise
  - Which behavioral program(s)?
  - Starting prescription? (e.g., how many and which hours in bed for SRT? Suggested rise time for SCT?)

# CBT-I presents several hurdles...



# Client Hurdles



Wanda was proud of herself for sticking to her one-cup-a-day limit...

*Unwilling to do the treatment fully.*

*Unwilling to not sleep. Rigidly adhere to the treatment with a control agenda.*



# A Perfect Fit



# Predisposing Characteristics + Precipitating Events

Sleep Disruption

## Perpetuating Factors

Physiological  
Changes

Compensatory  
Behaviors

Negative  
Cognitions

Medications

Stimulus Control  
Sleep Restriction  
Sleep Hygiene

Cognitive Restructuring  
Designated Worry Time  
Acceptance/willingness  
Cognitive Defusion  
Mindfulness

Insomnia Intervention Key: **Medical**

CBT-I  
ACT



# Targets of CT/ACT

---

- *Misperceptions* about sleep that create concern, anxiety, physiological arousal, and/or compensatory behaviors
  - “I MUST have 8 hours of sleep!”
  - “If I don’t sleep well tonight I’ll really blow that presentation tomorrow!”
- Thoughts that, regardless of accuracy, are *counter-productive*
  - “If I fall asleep now I can get 6 hours of sleep... If I fall asleep now I’ll get 5 hours of sleep... [etc]”



# Targets of CT/ACT (cont.)

---

- Thoughts that *interfere* with implementation of behavioral strategies
  - “I *can’t* give up caffeine!”
  - “It’s hopeless – nothing’s going to help.”
- Thought *processes* that increase cognitive or physiological arousal
  - Racing thoughts
  - Rumination
  - Sheer volume of thoughts
  - Worry





# Cognitive Restructuring

---

1. Monitor sleep-related thoughts/ attitudes/beliefs with thought record
2. Challenge thoughts
  - Is this really true? What's the evidence?
  - If it is true, what does it mean to me?
  - Is it helpful for me to be thinking this way?
  - What would I tell a friend who was thinking this?
3. Replace inaccurate and counter-productive thoughts with more accurate/workable ones



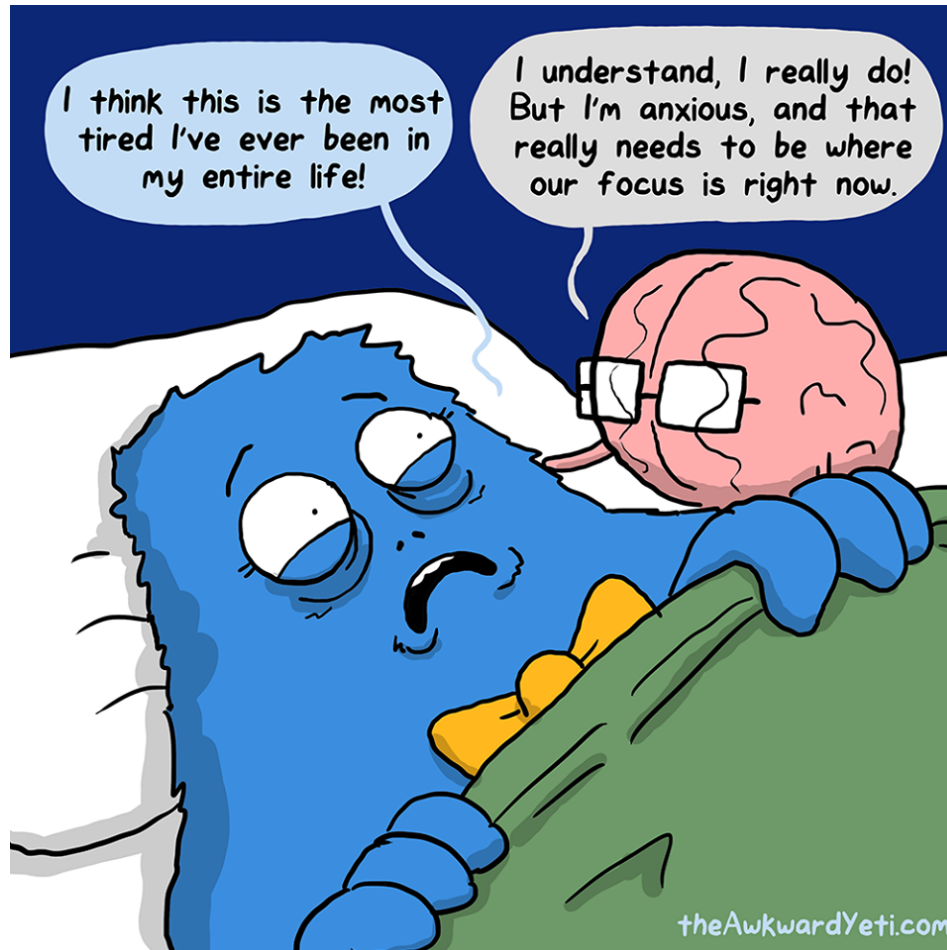
# CT: General Principles & Implementation Tips

---

- Tie to model; normalize
- Practice in-session
- Assign real-time monitoring/practice (HW)
  - Generally, complete during the day, not at bedtime
  - Anticipate and troubleshoot difficulties
  - Check-in during subsequent session(s)
- Help client create cards for common “negative cognitions” – “negative” on one side, more accurate/workable one on other



# Designated Worry Time





# Acceptance/Willingness

---

- “If you’re not willing to have it, you will” (struggle)
- Increase willingness to experience short-term pain
- Increase willingness to sleep (*huh?*)
- “Never try to sleep!” (surrender)
- Expect non-linear progress; be willing to maintain or renew efforts

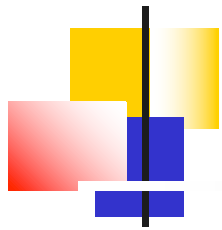


# Metaphors/Exercises

---

- Tug O' War
- Gun-to-head
- Chinese Fingertraps

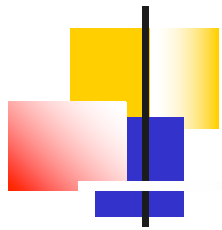




# Cognitive Defusion

---

- Stepping back from thoughts; creating space; getting unstuck; recognizing thoughts as thoughts and nothing more
- Examples
  - Note card exercise
  - Mindfulness
  - Put thoughts on... leaves on a stream; clouds; bubbles; ticker tape at bottom of TV; parade signs
  - “I’m having the thought that...”
  - Sing it; funny voices; various fonts on screen



# Mindfulness

---

- What it is: Paying attention, on purpose, in the present moment, without judgment
- What it is NOT: Relaxation; a hypnotic
- Practice during the day
  - Formal sitting practice
  - Mindfulness of daily activity
- How to use at night
  - non-striving



# Treatment Planning

---

- Which behavioral program(s)?
- Which strategies for targeting unhelpful thoughts, cognitive processes, or cognitive hyper-arousal?
- Sequencing?





# Case Examples

---

- #1: 17 y.o. male; onset & middle insomnia; “night owl” entire life; missing school – in danger of not graduating
- #2: 65 y.o. male; middle insomnia (awake 1-3 hrs, 5-6 nights/week)
- #3: 36 y.o. female; historically a long sleeper with high sleep inertia/low energy; recent onset insomnia; very anxious about it
- SRT=sleep restriction therapy; SCT=stimulus control therapy; DWT= designated worry time; TIB=time in bed; OEA=opposite-emotion-action



# Sample Treatment Courses

	CASE #1	CASE #2	CASE #3
SESSION 1	Interview Instruct on sleep log Rx: stay up later	Interview Instruct on sleep log 3P & 2-wave models Rx: SCT	Interview Instruct on sleep log Gun-to-head metaphor
SESSION 2	Review log 3P & 2-wave models Rx: SRT	<2-month gap: had responded well to SCT> Reviewed SCT Rx: return to SCT	Review log Tug O' War Cognitive distortions Introduced SRT
SESSION 3	Review log & SRT Rx: SRT+15 min.		Rx: SRT
SESSION 4	Review log & SRT Psychoed re: meds DWT Rx: SRT+15 min		Review log & SRT 2-wave model; OEA mindfulness Rx: SRT; mindfulness
SESSION 5	Review log & SRT Relapse prevention		Review log & SRT Rx: SRT+1 hr
SESSION 6			Relapse! Return to original TIB=6 hrs



# Research: Multi-component CBTi for Chronic Insomnia

---

- About two-thirds of participants respond (Edinger et al. 2001; Harvey et al. 2014; Perlis et al. 2000)
- Meta-analysis of 19 studies (Trauer et al. 2015):
  - Improvements in sleep onset latency, wake after sleep onset, and sleep efficiency
  - Marginal improvement in total sleep time
  - Improvements maintained over time
-



# Research:

## CBTi for Co-morbid Insomnia

---

- MDD: 4-6 week CBTi improved sleep and resulted in remission of MDE in over two-thirds of participants (Ashworth et al. 2015; Taylor et al. 2007)
- Bipolar I Disorder: 8-week expanded CBTi protocol improved sleep and decreased mania relapse (Harvey et al. 2015)
- Cancer: 8 studies; improved sleep efficiency, sleep onset latency, wake after sleep onset, and self-reported insomnia severity (Johnson et al. 2016)
-

# Summary:

## Choose Your Own Adventure



- Assess
- Orient pt toward destination (educate)
- Pick a (behavioral) path
- Add side trips (cognitive strategies; sleep hygiene)
- 
- Track progress (sleep log)
- Effectiveness as compass
- Expect “switchbacks”
- Compassion for the burn of an uphill climb
- Celebrate & help maintain gains (wellness/rel. prev. plan)

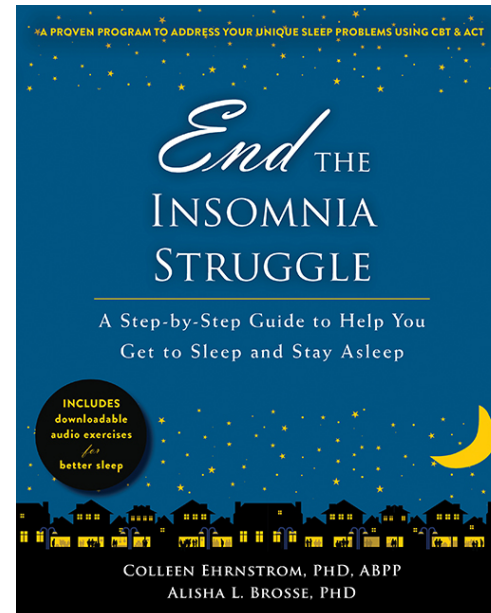




# Additional Training/Consult

---

- Monthly consultation group (email [info@bouldercbt.com](mailto:info@bouldercbt.com))
- Workbook with additional web resources





# Other Resources

---

- “The Insomnia Answer: A personalized program for identifying and overcoming the three types of insomnia” (Glovinsky & Spielman, 2006)
- “The Insomnia Workbook: A comprehensive guide to getting the sleep you need” (Silberman, 2009)
- “The Sleep Book: How to sleep well every night” (Meadows, 2014) (ACT-I)



# References

---

- Ashworth et al. 2015. A randomized controlled trial of cognitive behavior therapy of insomnia: An effective treatment for comorbid insomnia and depression. *Journal of Counseling Psychology* 62: 115-123.
- Edinger et al. 2001. Cognitive behavioral therapy for treatment of chronic primary insomnia: a randomized controlled trial. *JAMA* 285: 1856–1864.
- Harvey et al. 2014. Comparative efficacy of behavior therapy, cognitive therapy, and cognitive behavior therapy for chronic insomnia: a randomized controlled trial. *Journal of Consulting and Clinical Psychology* 82: 670–683.
- Harvey et al. 2015. Treating insomnia improves mood state, sleep, and functioning in bipolar disorder: A pilot randomized controlled trial. *Journal of Consulting and Clinical Psychology* 83: 564-577.
- Johnson et al. 2016. A systematic review and meta-analysis of randomized controlled trials of cognitive behavior therapy for insomnia (CBT-I) in cancer survivors. *Sleep Medicine Reviews* 27: 20-28.
- Perlis et al. 2000. Behavioral treatment of insomnia: A clinical case series study. *Journal Behavioral Medicine* 23: 149–161.
- Taylor et al. 2007. A pilot study of cognitive-behavioral therapy of insomnia in people with mild depression. *Behavior Therapy* 38: 49–57.
- Trauer et al. 2015. Cognitive behavior therapy for chronic insomnia: A systematic review and meta-analysis. *Annals of Internal Medicine* 163: 191–204.
-