



UW PACC

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CBTI PART III: C IS FOR COGNITIVE

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DISCLOSURES

I have no conflicts of interest to disclose relevant to this presentation.

RESEARCH EVIDENCE FOR CBT-I

- Conclusively demonstrated that CBT-I is effective in treating insomnia across many different settings and patient populations
- Stimulus control and time-in-bed restriction are the most important components of CBT-I
- Dissemination of CBT-I has been slow

Vitiello, McCurry, & Rybarczyk, 2013

DEFINING AND DIAGNOSING INSOMNIA

- Difficulty initiating or maintaining sleep
- Difficulty functioning during the day (includes distress regarding insomnia)
- Frequency and duration definitions
 - ≥ 3 months duration
 - Frequency of difficulty with sleep onset, middle-of-the-night awakening, or awakening too early
- Definitions sometimes include nonrestorative sleep
- Insomnia is a *subjective* problem

INDICATIONS FOR CBT-I

- Indications:
 - Insomnia symptoms + maladaptive behaviors or conditioned arousal
- Insomnia defined as trouble initiating or maintaining sleep
 - Average sleep latency
 - Wake after sleep onset (WASO)
 - Early morning awakenings

TOOLS FOR ASSESSMENT AND TREATMENT

- Insomnia Severity Index (Morin et al, 2011)
- Epworth Sleepiness Scale (Johns, 1991)
- STOP-BANG Screening for Sleep Apnea
- Sleep Diary
- Initial Interview

THE SLEEP DIARY

Fundamental to assessing progress and identifying problems

Based on patient recall of the events of the night (and day) before

Compliance with keeping it is good when it is assigned with care

SLEEP DIARIES

- Consensus Sleep Diary
 - Varying degrees of complexity
 - Provides considerable data (potentially)
 - Various means of calculating the parameters of interest
- Visual Sleep Log
- CBTi Coach App

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
In Bed							
Time to Fall Asleep							
Awake After Sleep Onset							
Time Out of Bed							
Time in Bed TIB							
Total Sleep Time - TST							
Sleep Efficiency							

Week 1												
5/1-5/8		sample	day 1	day 2	day 3	day 4	day 5	day 6	day 7	AVERAGE		
Dates		1/1/2011										
Bedtime (Time went into bed)	Q1_BT	23:30								#DIV/0!	Bedtime	
Lights out (Try to go to sleep)	Q2_LO	23:45								#DIV/0!	Lights out	
Latency to sleep (minutes to fall asleep)	Q3_SL	30								#DIV/0!	Latency to fall asleep	
minutes awake in middle of night (how long awakenings last)	Q5_WASO	60								#DIV/0!	Minutes awake in middle of night	
awakening	Q6a_WT	7:00								#DIV/0!	Wake time	
Mins awake too early (how many minutes earlier)	Q6c_EMA	30								#DIV/0!	minutes awake too early	
Out of bed (out of bed for the day)	Q7_OB	8:00								#DIV/0!	out of bed for day	
	BT	-0.50								#DIV/0!		
	LO	-0.25								#DIV/0!		
	WT	7.00								#DIV/0!		
	OB	8.00								#DIV/0!		
Time in Bed	TIB	8.25								#DIV/0!	Time in Bed	
Total Sleep Time	TST	5.75								#DIV/0!	Total Sleep Time	
Sleep Efficiency	SE (%)	69.70%								#DIV/0!	Sleep Efficiency	

24-HOUR SLEEP INTERVIEW

- What time do you get out of bed in the morning? Is it the same on weekends?
- How do you spend your day?
- Do you take naps?
- Do you drink alcohol with dinner? Use cannabis?
- What is your routine before bed?
- What time do you get in bed?
- When do you try to fall asleep?
- How long does it take to fall asleep? What do you think about?
- How often do you wake up during the night?
- What do you do when you wake up during the night?
- Are there environmental disturbances at night?

CONDITIONS REQUIRING REFERRAL TO A SLEEP CLINIC

- Excessive daytime sleepiness
- Sleep-disordered breathing
 - Obstructive sleep apnea (OSA)
 - Central sleep apnea (CSA)
 - Upper airway resistance syndrome (UARS)
 - Obesity hypoventilation syndrome (OHS)
- Restless Legs Syndrome (RLS) or Periodic Limb Movement Disorder (PLMD)
- Circadian Rhythm Disorders
- Parasomnias

SITUATIONS IN WHICH CBTI IS CONTRAINDICATED

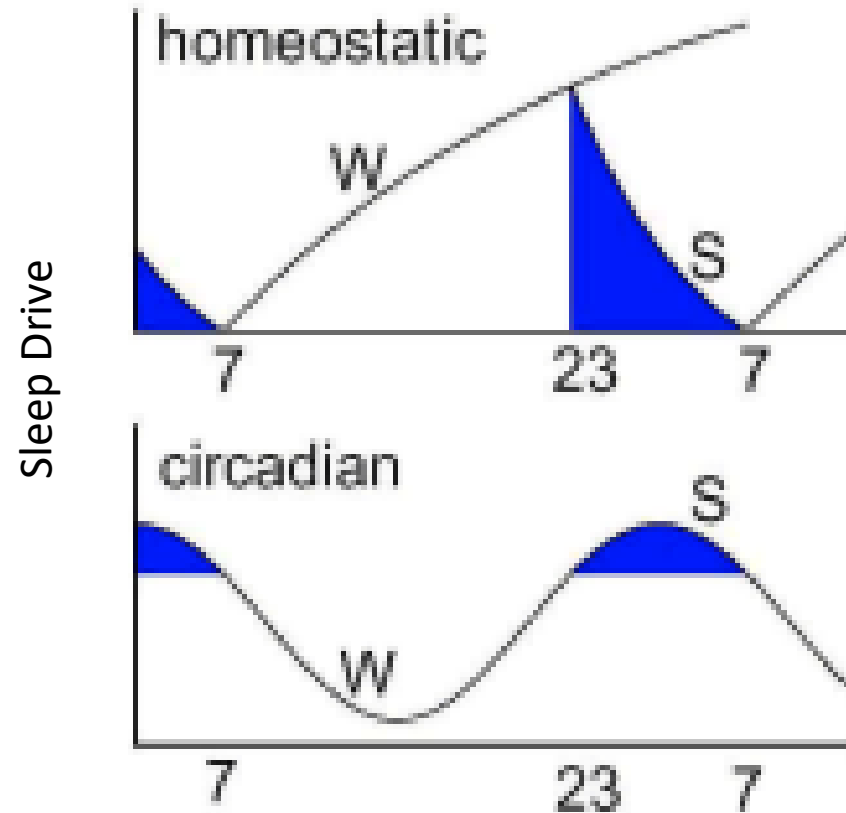
- Seizure Disorder
- Bipolar Disorder
- Excessive Daytime Sleepiness (Epworth Sleepiness Scale ≥ 11)
- Untreated or suboptimally treated sleep apnea
- Unstable medical conditions
- Unstable psychological conditions
- Active substance abuse (may include heavy drinking)

SLEEP – A BRIEF PRIMER

Sleep is a function of 3 processes

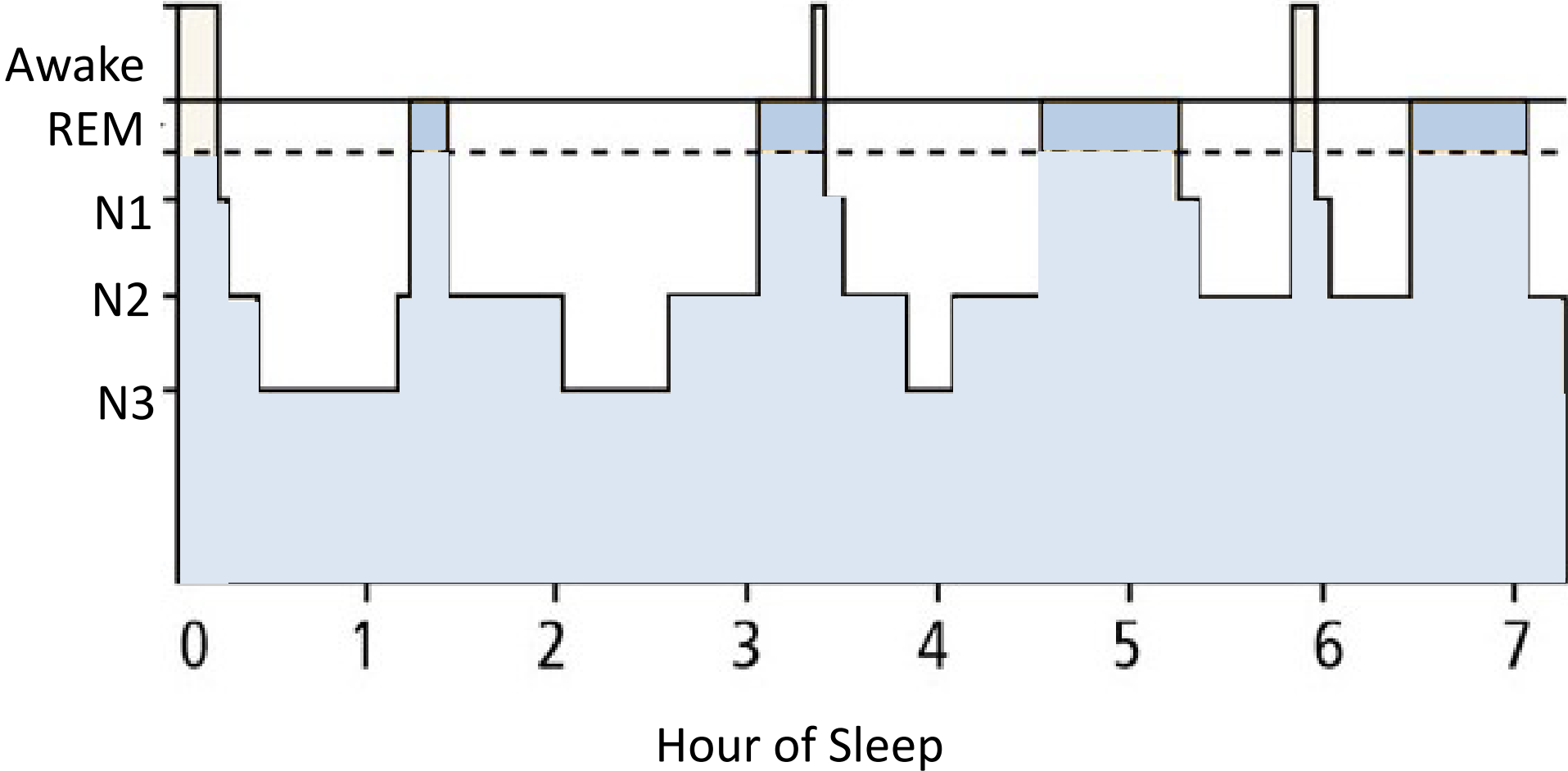
- Process C is the Circadian Clock – we sleep best at night
- Process S is the homeostatic drive for sleep (called sleep drive, sleep pressure) – everybody sleeps!
- Arousal level – too much arousal (physiological, cognitive, or conditioned) can override Process C and Process S
- It is normal to have difficulty sleeping during periods of acute stress
- Social and environmental timekeepers (Zeitgebers) also play a role

TWO-PROCESS MODEL OF SLEEP

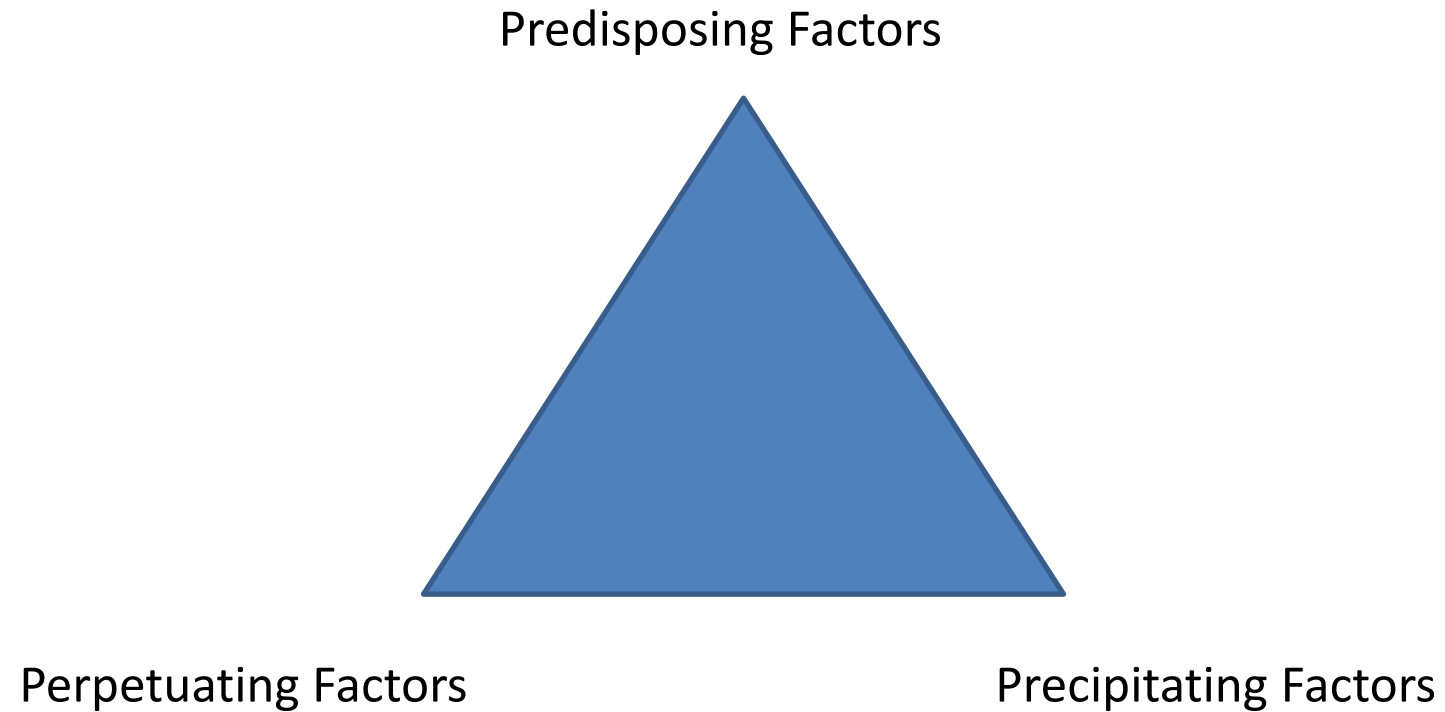


Borbély & Achermann, 1992

SLEEP ARCHITECTURE DURING THE NIGHT



THE “THREE P’S” OF INSOMNIA



Spielman, Caruso, & Glovinsky, 1987

THE “3 P’S” MODEL OF CHRONIC INSOMNIA

- Predisposing factors
 - Anxious disposition
 - Lifestyle factors
- Precipitating factors
 - Acute Stress
 - Other temporary sleep disruptors
- Perpetuating Factors
 - Things people due to address transient disruptions in sleep
 - CBTi addresses perpetuating factors

Ellis et al, 2021

COMPONENTS OF CBTI

- Psychoeducation
- Behavioral Components
- Sleep Hygiene
- Cognitive Components
- Sleep Diary

PSYCHOEDUCATION

- Provide a general description of the role of circadian rhythms and sleep drive in achieving a good night's sleep
- Normalize the experience of insomnia
- Explain sleep requirements vary from person to person, and across the lifespan
- Explain that acute stress is associated with difficulty sleeping
- Find examples of good functioning despite a poor night of sleep
- Describe, if necessary, the pattern of sleep architecture over a typical night

BEHAVIORAL COMPONENTS

- Stimulus Control of Sleep
- Time-in-Bed Restriction (Sleep Restriction)

STIMULUS CONTROL OF SLEEP

- Conditioning – the bed should only be associated with sleep and sex
- Instructions:
 - Use the bed only for sleep and sex
 - Go to bed only when drowsy
 - If you are lying in bed for 20-30 minutes and wide awake, frustrated, unable to sleep; get out of bed
 - Go to another room and sit there and read or do some other relaxing activity until you feel drowsy, then return to bed
 - Repeat as necessary until you fall asleep, or it is time to be out of bed for the day
 - Get out of bed at the same time every day, regardless of how well you have slept
 - Do not take naps

ELECTRONICS AND SOCIAL MEDIA

- Televisions don't belong in bedrooms
 - Often a large light-emitting source
 - Often recalcitrant regarding removal
- Laptops, tablets, smartphones:
 - Introduce a light source (screen)
 - Provide too much stimulation (games, surfing)
 - Introduce outside worries into the bedroom (e-mail, texting, social media)

TIME-IN-BED RESTRICTION (“SLEEP RESTRICTION”)

- Used to increase sleep drive at bedtime and throughout the night
- Based on the calculation of Sleep Efficiency over a 1-2 week period
- Sleep Efficiency is Total Sleep Time (TST) divided by Time in Bed (TIB)
 - $SE = TST/TIB$
 - People with insomnia have lower Sleep Efficiency than good sleepers. Example:

John spends 10 hours in bed each night, on average. But he only sleeps 6 hours, because it takes him 2 hours to fall asleep and he is also awake for 2 hours in the middle of the night. His SE is $6/10 = 60\%$

TIME-IN-BED RESTRICTION, CONTINUED

- Prescription for TIB is based on Total Sleep Time (TST) + 30 minutes
- Never fall below a prescription of less than 5 hours
- Timing is negotiated with the patient
- When the patient returns with SE > 85% (some use 90%), assign more sleep
- Continue increasing TIB until SE starts to decline again (think of it as titrating the amount of time in bed)
- Teach the patient to be able to figure this out for themselves

CONCERNS ABOUT TIB RESTRICTION: ISN'T A GOOD NIGHT'S SLEEP IMPORTANT?



Most people with insomnia, as well as most people in general, have had to function without getting a good night's sleep



Sleeping poorly means sleep drive will be high the following day



Ask the patient for examples from their own life experience.

CONTRAINDICATIONS FOR TIME-IN-BED RESTRICTION (SLEEP RESTRICTION) COMPONENT

- Use should be modified in patient who will not be able to tolerate sleep deprivation or excessive daytime sleepiness
 - Poorly controlled seizure disorder
 - Bipolar disorder who have a history of manic and/or hypomanic episode triggered by sleep loss in the past
 - Recent change in health status (illness, accident, surgery)
 - Excessive sleepiness during the day (underlying sleep disorder)
 - Unacceptable occupational risks due to increased sleepiness (DOT)

Edinger et al, 2021

COGNITIVE COMPONENTS

- Worrying about sleep – address beliefs about sleep and misattributions related to sleep
 - “I need to take sleeping pills to sleep”
 - “I cannot stay awake in the afternoons at work because I sleep poorly at night”
 - “If I do not get at least 8 hours of sleep at night, something bad will happen”
- Worrying about “things” – use Constructive Worry Time

ADDRESSING UNHELPFUL BELIEFS AND MISATTRIBUTIONS ABOUT SLEEP

- Thought Records
- Guided discovery during session
- Evidence for and against
- Further psychoeducation (ask-tell-ask)

CONSTRUCTIVE WORRY TIME

- Set aside a time during the day to “worry” even if you do not feel you need to.
- Use the time for active problem-solving and planning.
- Provide yourself with a reminder that you have this time set aside for worry.

SLEEP HYGIENE

- Limit use of caffeinated beverages
- Limit use of alcohol
- Get exercise (but not late in the evening)
- Keep bedroom quiet and dark
- Avoid an overly heated bedroom

PLEASE CONTACT ME IF YOU HAVE QUESTIONS!!!!

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