



TBI-BH ECHO

Traumatic Brain Injury – Behavioral Health ECHO
UW Medicine | Psychiatry and Behavioral Sciences

TBI-BH ECHO 2026

Considerations for Cognitive Behavioral Therapy for Insomnia with Comorbid Traumatic Brain Injury

Mackenzie J. Lind, MD, PhD

Staff Psychiatrist/Acting Assistant Professor

VA Puget Sound/UW Department of Psychiatry and Behavioral Sciences

March 20, 2026



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Speaker Disclosures

- No conflicts of interest
- Note that the opinions expressed in this presentation are my own and do not reflect those of the United States government

> **The following series planners have no conflicts of interest:**

- Jennifer Erickson, DO
- Jess Fann, MD
- Cherry Junn, MD
- Chuck Bombardier, PhD
- Cara Towle, MSN, RN, MA



Objectives

1. Describe the epidemiology and diagnosis of insomnia, with a focus on populations with TBI
2. Review the basic components of CBT for insomnia
3. Discuss special considerations for CBT-I in TBI populations



EPIDEMIOLOGY (Insomnia)

- > Insomnia symptoms are common!
 - 1/3 of adults report at least one nighttime symptom of insomnia
 - 40% of those who present to primary care endorse insomnia symptoms
 - Prevalence of 5-10% when adhering to diagnostic criteria
 - More common: women, increasing age, shift work, psychiatric/medical comorbidities



EPIDEMIOLOGY (TBI)

- > Incidence of 1.7 million per year
 - 2.53 million TBI-related ER visits in 2014
 - 288,000 hospitalizations related to TBI in 2014
 - 56,800 TBI-related deaths in 2014
 - Older individuals (>75) have highest rates of hospitalization/death



EPIDEMIOLOGY (Combined)

- > Sleep disturbances are common + persistent in TBI
 - 30-50% of patients with TBI endorse insomnia
 - Prevalence of insomnia disorder 27% vs. symptoms 72% (Montgomery et al. 2022)
- > Insomnia can develop or become worse following TBI
 - 80% of TBIs are mild, insomnia, more common in mild TBI
- > Both insomnia and TBI have many negative sequelae:
 - Economic impacts (individual, society)
 - Effects on physical and mental health
 - Occupational functioning
 - Social functioning

(Dietch & Furst 2020, Morin & Jarrin 2022)



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ADDITIONAL EFFECTS OF TBI ON SLEEP

- > Overall prevalence of sleep disturbances in TBI is estimated to be 30-70%
- > Sleep is important because it can promote recovery, impact cognitive performance
- > Types of sleep related disturbances
 - Insomnia
 - Fatigue
 - Daytime sleepiness
 - Circadian rhythm disturbances
 - Other sleep disorders (e.g., obstructive sleep apnea [OSA], central sleep apnea)



DEFINING AND DIAGNOSING INSOMNIA

- > Definition of insomnia per DSM-V-TR:
- > Dissatisfaction with sleep quantity or quality, associated with 1 or more of the following: Difficulty initiating sleep, difficulty maintaining sleep, or early morning awakening
- > Present for at least 3 months
- > At least 3 times per week
- > Causing clinically significant distress or impairment
- > Sleep difficulty occurs despite adequate opportunity

(APA 2022)



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DEFINING AND DIAGNOSING INSOMNIA

- > NOT better explained by or occurring exclusively during another sleep/wake disorder
- > NOT adequately explained by comorbid medical or psychiatric disorder
- > NOT attributable to the physiological effects of a substance



DIFFERENTIAL DIAGNOSIS OF INSOMNIA

- > Behaviorally insufficient sleep syndrome (BISS)
- > Other sleep disorders:
 - Obstructive sleep apnea
 - Restless leg syndrome
 - Periodic leg movement disorder
 - Circadian rhythm disorders (delayed sleep-wake phase disorder, advanced sleep-wake phase disorder)
 - > Also consider changes to sleep that occur during normal aging
- > Other psychiatric disorders:
 - Major depressive disorder
 - Posttraumatic stress disorder (nightmares, nighttime hyperarousal)
- > Pain

(APA 2022)



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OBSTRUCTIVE SLEEP APNEA

- > Prevalence of 20-77% in TBI populations in recent review
 - More common than in general population
- > Bidirectional relationships
 - OSA may predispose to TBI (e.g., due to accidents)
 - Trauma to brain may lead to OSA
 - > OSA may be more common in blunt injury, insomnia in blast
- > Sleep is important for recovery
 - More cognitive impairment w/comorbid OSA
 - May also make it difficult to engage in treatment for TBI, also difficulties with CPAP use



COMORBID INSOMNIA AND OBSTRUCTIVE SLEEP APNEA (COMISA)

- > Very common to have both!
 - These are the two most common sleep disorders
- > 30-40% of insomnia patients have comorbid OSA
- > 30-50% of patients with OSA report insomnia symptoms
- > COMISA may also be associated with increased risk of cardiovascular disease and all-cause mortality
- > Treating BOTH is important!
 - Managing insomnia in patients with OSA can lead to better outcomes
 - Comorbid insomnia can make CPAP adherence more challenging
 - CBT-I is effective for COMISA, may improve CPAP use



HOW DO WE TREAT INSOMNIA?



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COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

- > Considered gold-standard treatment for insomnia (Schutte-Rodin et al. 2008, Edinger et al. 2021)
- > Effective in treating insomnia across many different settings and patient populations
 - Similar efficacy to medications within 6-8 weeks, better outcomes at 6-24 months, less side effects (original JAMA study; Morin et al. 1999)
 - Multiple newer studies in support (Brasure et al. 2015, Johnson et al. 2016)
 - Included in guidelines for insomnia such as AASM (Edinger et al. 2021) and DOD (Management of Chronic Insomnia and Obstructive Sleep Apnea Workgroup 2025)



COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

- > Effective for individuals with comorbid psychiatric disorders (Hertenstein et al. 2022)
- > May also serve as prevention/early intervention for other mental health disorders such as depression (Palagini et al. 2024)
- > However, dissemination of CBT-I has been slow (Muench et al. 2022)
 - Current research: Variations to make this more accessible
 - Groups, video, digital/asynchronous, brief format, stepped care
- > **In a recent study of Veterans in polytrauma clinics, Veterans were 8x more likely to get meds than CBT-I** (Kinney et al. 2026)



COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

Table 1
Study characteristics.

Authors, year	N	Diagnosis and mean time since injury	Mean insomnia duration	Age, gender	Psych.	Pain	Med.	Insomnia symptoms assessment method	Major in- and exclusion criteria
CBT-I									
Ouellet & Morin, 2004 [12]	1	Moderate TBI 1 y post injury	almost 1 y	Late thirties male	n.r.	yes	Yes	Clinical interview insomnia disorder	Inclusion: insomnia disorder, TBI
Ouellet & Morin, 2007 [13]	11	TBI ^a 2.3 y post injury	1.93 y	27.3 y 5 female/6 male	yes	no	yes	Clinical interview insomnia disorder	Inclusion: age 18–50 y, TBI $\leq$ 5 y, insomnia disorder Exclusion: major medical or psychiatric comorbid condition, sleep difficulties before TBI, other sleep disorder (e.g. sleep apnea), significant pain that could be established as the cause of sleep disturbance
Lu et al., 2016 [26]	3	TBI ^a 3 y post injury	3 y	53.66 y 2 female/1 male	Yes	Yes	n.r.	ISI > 10 and PSQI > 5	Inclusion: clinically significant symptoms of insomnia, fatigue, depression, and pain
Nguyen et al., 2017 [27]	24	TBI ^a 3.81 y post injury	n.r.	43.87 $\pm$ 12.95 8 females/16 males	Yes	Yes	Yes	PSQI > 5	Inclusion: age 16–65, PSQI > 5 and/or FSS $\geq$ 4 Exclusion: other neurological disorders, acute psychiatric symptoms, sleep apnea (screened for risk with Berlin Questionnaire)
Nguyen et al., 2017 [33]	15	Stroke 2.25 y post injury	n.r.	48.8 4 female, 11 male	yes	yes	Yes	PSQI > 5	Inclusion: age 16–65, PSQI > 5 and/or FSS $\geq$ 4 Exclusion: comorbid neurological disorders, acute psychiatric symptoms or substance abuse, current sleep apnea (screened for risk with Berlin Questionnaire)
Theadom et al., 2017 [28]	24	TBI ^b 1.07 y post injury	n.r.	35.9 $\pm$ 11.8 15 female/9 male	n.s. ^c	n.r.	n.r.	PSQI $\geq$ 5	Inclusion: between 3 mo and 3 y following mild or moderate TBI, aged 18–60, difficulty initiating and/or maintaining sleep < 3 mo. Exclusion: untreated sleep disorder (e.g. sleep apnea), shift work-alcohol abuse, unstable medical condition
Herron et al., 2018 [34]	5	Stroke 8.73 y post injury	n.r.	59.8 3 female/2 male	n.r.	n.r.	yes	DSM-IV criteria for insomnia	Inclusion: $\geq$ 1 response as ‘often true’ (given a score of 3/4) for the following five unhelpful cognitions listed on the Sleep Hygiene Awareness and Practice Scale, $\geq$ 1 y post-stroke, insomnia disorder. Exclusion: sleep disorders other than insomnia, medication that adversely impacts sleep, other serious co-morbid conditions, significant cognitive difficulties

M.E. Ford et al. / Sleep Medicine Reviews 50 (2020) 101381



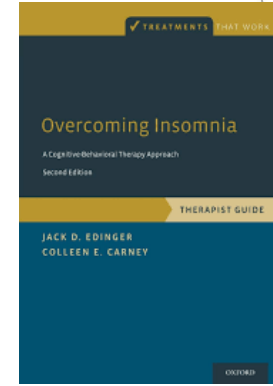
COGNITIVE BEHAVIORAL THERAPY FOR INSOMNIA

- > CBT is recommended treatment for insomnia after TBI (Pilon et al. 2021)
- > Some recommend adding fatigue management (Oullet, Beaulieu-Bonneau & Morin 2025)
- > Similar problems with availability of providers/dissemination in this population
- > Newer evidence for use in TBI populations:
 - Randomized clinical trial of internet-based CBT-I (6 sessions) for military/Veterans reduced self-reported insomnia and depressive symptoms (Malarkey et al. 2024)
 - Use of CBT-I + smartphone app in military TBI clinic demonstrated reductions in sleep latency, wake after sleep onset, and improved Insomnia Severity Index scores (Matsuura, Keller, Lustik, Campbell & Grills 2023)
 - Randomized clinical trial of blended online CBT-I for acquired brain injury demonstrated improvement in insomnia severity (Ford et al. 2023)
 - > Note this was adapted to TBI populations (also included stroke)

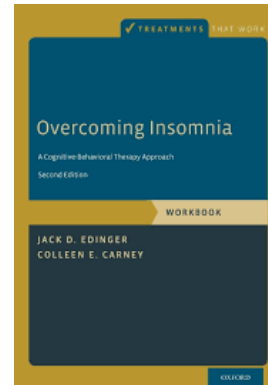


COMPONENTS OF CBT-I

1. Psychoeducation
2. Sleep Hygiene
3. Sleep Diary
4. Behavioral Components
 - Stimulus Control***
 - Time in bed restriction***
5. Cognitive Components



Edinger, J. D., & Carney, C. E. (2008). *Overcoming insomnia: A cognitive-behavioral therapy approach, therapist guide*. Oxford University Press.



Edinger, J. D., & Carney, C. E. (2008). *Overcoming insomnia: A cognitive-behavioral therapy approach, workbook*. Oxford University Press.

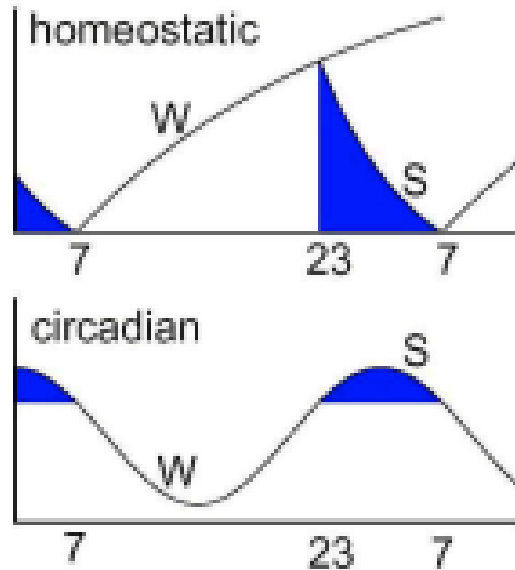


INITIAL CBT-I SESSION

- > Primary focus is on obtaining sleep history, providing overview of treatment, and providing initial suggestions (Edinger & Carney 2008)
- > **Suggested adaptations for TBI**, highlights from Table 44.1 in Ouellet, Beaulieu-Bonneau, Morin 2025 book chapter:
 - Realistic expectations
 - Provide education on how TBI-related fatigue may not resolve with other improvements to sleep quality
 - Goal: increased quality of life, participation in more activities



1. PSYCHOEDUCATION: TWO PROCESS MODEL



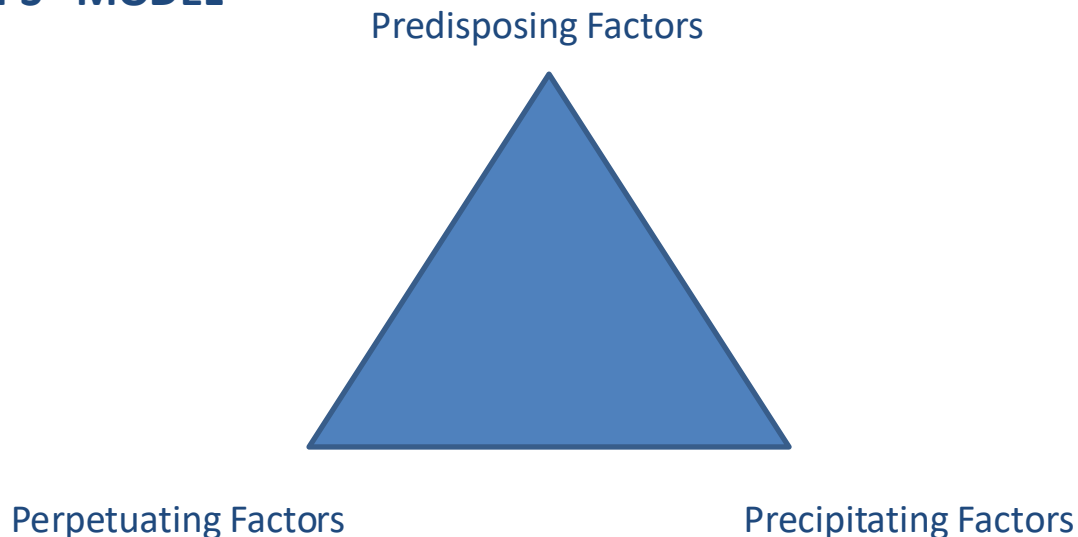
(Borbely & Achermann 1992)



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1. PSYCHOEDUCATION: DEVELOPMENT OF CHRONIC INSOMNIA

“THREE PS” MODEL



(Spielman, Caruso, & Glovinsky 1987)



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1. PSYCHOEDUCATION

3Ps MODEL FOR CHRONIC INSOMNIA

- > Predisposing factors
 - Personality factors (e.g., anxious disposition)
 - Genetics
 - Early life experiences
 - Lifestyle factors
 - Other comorbidities
- > Precipitating factors
 - Acute Stress
 - Other temporary sleep disruptors
- > Perpetuating Factors
 - Things people do to address transient disruptions in sleep
 - > Too much time in bed, worrying in bed, caffeine use

*****CBT-I addresses
PERPETUATING factors*****

(Ellis et al. 2021)



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HOW TBI CAN AFFECT THE 3 PS

(Dietch & Furst 2020)

> PREDISPOSING

- History of insomnia
- Prior TBIs

> PRECIPITATING

- Changes following TBI
 - > pain
 - > mental health comorbidities
 - > physical changes
 - > neurological changes
 - > change in activity level



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HOW TBI CAN AFFECT THE 3 PS

(Dietch & Furst 2020)

- > **PERPETUATING (*in response to insomnia, targeted by CBT-I)**
 - Go to bed earlier/wake up later, take naps
 - > Spend more time in bed
 - > Negative impact on association between bed and sleep
 - Negative beliefs about sleep
 - > Increase worry, hyperarousal, etc.
 - > Examples:
 - Lack of sleep impacts recovery
 - Sleep changed after TBI



HOW TBI CAN AFFECT THE 3 PS

(Dietch & Furst 2020)

- > **PERPETUATING (*in response to insomnia, targeted by CBT-I*)**
 - Unique to TBI:
 - In the acute phase, individuals can develop pleiosomnia
 - > Increased sleep need
 - Will return to baseline, which can lead to insomnia
 - More common if pain or severe injury present



1. PSYCHOEDUCATION

> Adaptations for TBI:

- Discuss how TBI affects sleep, review prevalence of disturbed sleep including insomnia/fatigue

(Ouellet, Beaulieu-Bonneau, Morin 2025)



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2. SLEEP HYGIENE

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

(Edinger & Carney 2008)



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2. SLEEP HYGIENE

> Adaptations for TBI:

- Gradual increase in physical activity
- Ask about substances, especially alcohol/other substances used to medicate sleep

(Ouellet, Beaulieu-Bonneau, Morin 2025)



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3. 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
 - <https://mobile.va.gov/app/cbt-i-coach>



	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							



INSTRUCTIONS:

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 get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7 AM.

week 1

week 2 -



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3. SLEEP DIARIES

> Adaptations for TBI:

- Practice in session
- Consider a simplified version
- Include self-monitoring of fatigue/energy as well
- Discuss effective routine for filling this out regularly

(Ouellet, Beaulieu-Bonneau, Morin 2025)



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4. BEHAVIORAL COMPONENTS

- > Stimulus Control of Sleep
 - Conditioning – the bed should only be associated with sleep and sex
 - Televisions don't belong in bedrooms!
 - Laptops/tablets/cellphones: light source, too much stimulation, introduce outside worries
- > 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
 - More details in CBT-I manual

(Edinger & Carney 2008)



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4. BEHAVIORAL COMPONENTS

Stimulus control 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

(Edinger & Carney 2008)



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4. BEHAVIORAL COMPONENTS

> Adaptations for TBI:

- May need to adapt behavioral recommendations for patient's mobility or other limitations
 - > e.g., chair next to bed instead of leaving room
- Address naps- may need to be flexible though should limit duration/timing
 - > Less than 30 min, none after 3 pm
- Establish routines in AM/PM to help adhere to schedule

(Ouellet, Beaulieu-Bonneau, Morin 2025)



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5. COGNITIVE COMPONENTS

- > **Worrying about “things” – use 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.
 - > <https://drcoleencarney.com/resources/constructive-worry-worksheet/>
- > **Worrying about sleep – addressing unhelpful beliefs and misattributions related to sleep**
 - Thought Records
 - > <https://drcoleencarney.com/resources/the-thought-worksheet/>
 - Guided discovery during session
 - Evidence for and against
 - Further psychoeducation (ask-tell-ask)

(Edinger & Carney 2008)



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Constructive Worry Worksheet

CONCERNS	SOLUTIONS
1.	1.
	2.
	3.
2.	1.
	2.
	3.
3.	1.
	2.
	3.



The Thought Worksheet

Complete a Worksheet whenever you experience a distressing sleep- or fatigue-related thought

Situation	Mood	Distressing Thoughts Or Images	Evidence that the most distressing thought is true	Evidence that the most distressing thought may not be true	Alternative/ balanced thoughts	Rate mood now
Describe the situation in which the distressing thought arose	Describe mood in one word and rate the intensity (0-100%)	Write down any thoughts or images going through your mind. Does this thought activate fears about your well-being or how others may view you?	Circle the most distressing thought in the previous column. Write factual evidence for this distressing thought. Stay away from evidence that is not factual. For example, a thought that “feels” true is not factually true.	Write down evidence that does not support this thought (e.g., are there experiences that show this thought is not true 100% of the time?)	Write a thought that is a better summary of the evidence for the thought	Copy the feelings from column 2. Rerate the intensity of the feelings.

Reproduced from Carney & Manber (2008) *Quiet Your Mind and Get to Sleep*



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5. COGNITIVE COMPONENTS

> Adaptations for TBI:

- Simplify cognitive component
- Focus on psychoeducation as opposed to Socratic questioning
- May need to guide interpretation, write things down
- Dysfunctional Beliefs and Attitudes about Sleep (DBAS) scale may be particularly helpful
- Elicit/address TBI-related maladaptive thoughts

(Ouellet, Beaulieu-Bonneau, Morin 2025)



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OTHER ASPECTS TO CONSIDER

- > Presentation can be heterogeneous
- > Risk of another TBI can complicate recovery
- > Review stress management techniques
- > Provide fatigue psychoeducation, including recognizing fatigue
- > Discuss activity pacing, alternating tasks

(Dietch & Furst 2020, Ouellet, Beaulieu-Bonneau, Morin 2025)



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Dysfunctional Beliefs and Attitudes About Sleep Scale

1. I need 8 hours of sleep to feel refreshed and function well during the day.
2. When I don't get the proper amount of sleep on a given night, I need to catch up the next day by napping or the next night by sleeping longer.
3. Because I am getting older, I need less sleep.
4. I am worried that if I go for 1 or 2 nights without sleep, I may have a "nervous breakdown".
5. I am concerned that chronic insomnia may have serious consequences on my physical health.
6. By spending more time in bed, I usually get more sleep and feel better the next day.
7. When I have trouble falling asleep or getting back to sleep after nighttime awakening, I should stay in bed and try harder.
8. I am worried that I may lose control over my abilities to sleep.
9. Because I am getting older, I should go to bed earlier in the evening.
10. After a poor night's sleep, I know it will interfere with my activities the next day.
11. To be alert and function well during the day, I believe I would be better off taking a sleeping pill rather than having a poor night's sleep.
12. When I feel irritable, depressed, or anxious during the day, it is mostly because I did not sleep well the night before.
13. Because my bed partner falls asleep as soon as his or her head hits the pillow and stays asleep through the night, I should be able to do so too.
14. I feel insomnia is basically the result of aging and there isn't much that can be done about this problem.
15. I am sometimes afraid of dying in my sleep.
16. When I have a good night's sleep, I know that I will have to pay for it the next night.
17. When I sleep poorly one night, I know it will disturb my sleep schedule for the whole week.
18. Without an adequate night's sleep, I can hardly function the next day.
19. I can't ever predict whether I'll have a good or poor night's sleep.
20. I have little ability to manage the negative consequences of disturbed sleep.

Representative Studies Using Scale

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21. When I feel tired, have no energy, or just seem not to function well during the day, it is generally because I did not sleep well the night before.
22. I get overwhelmed by my thoughts at night and often feel I have no control over this racing mind.
23. I can still lead a satisfactory life despite sleep difficulties.
24. I believe insomnia is essentially the result of a chemical imbalance.
25. I feel insomnia is ruining my ability to enjoy life and prevents me from doing what I want.
26. My sleep is getting worse all the time and I don't believe anyone can help.
27. A nightcap before bedtime is a good solution to sleep problems.
28. Medication is probably the only solution to sleeplessness.

Note: For each statement, the subject indicates his or her level of agreement or disagreement on a visual analog scale such as the following one.

Strongly _____ Strongly
Disagree _____ Agree

Copyright © 1993 by the American Psychological Association. Reproduced with permission from Morin et al. [1].

(Morin et al. 1993)



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ADDITIONAL CONSIDERATIONS FOR TBI

- > Oullet and colleagues (2025) outline this in detail in Box 44.1 (Special Considerations for the Administration of CBT for Insomnia following TBI) of TBI and sleep book chapter
- > Will review highlights of sections presented here; some overlap with proposed modifications
- > Ouellet, Beaulieu-Bonneau, Savard & Morin (2020) book provides further guidelines



CONSIDERATIONS FOR TBI COMORBIDITY

> Cognitive deficits

- CBT no less effective despite problems w/memory or attention
- Shorten sessions if needed
- Use simplified materials- worksheets, sleep logs
- Repetition, concrete examples, in-session practice
- Consider involving another person (e.g., significant other)
- Use DBAS



CONSIDERATIONS FOR TBI COMORBIDITY

> **Behavioral particularities**

- Disinhibition may occur
- Adherence may be more challenging
- Remain flexible
- Discuss effects of substances on sleep
- Reinforce structure/therapy plan



CONSIDERATIONS FOR TBI COMORBIDITY

> Fatigue

- Common and at least in part separate from insomnia
 - > Increase in fatigue is common initially
 - > Orient patient to this
- Evaluate/elicit details about naps
- Explore thoughts/behaviors related to fatigue (+ add fatigue management strategies)
- Pay attention to treatment timing



CONSIDERATIONS FOR TBI COMORBIDITY

> **Daily routine**

- Irregular sleep/wake cycles are common
- Important to find activities to help maintain adherence/get up in AM



CONSIDERATIONS FOR TBI COMORBIDITY

> Depression and anxiety symptoms

- Commonly comorbid; address as appropriate if these come up -> similar techniques can be applied
- Careful with sleep restriction in s/o depressive episode
- Encourage balance of activities, social support
- Refer to additional mental health resources if needed



CONSIDERATIONS FOR TBI COMORBIDITY

> **Physical function**

- May have physical limitations which affect activities, contribute to habits which perpetuate insomnia
- Consider pain, pain medications
- Collaborate with other medical providers



OTHER NON-PHARMACOLOGIC INTERVENTIONS

- > Several other interventions have been studied, though literature is limited:
 - Exercise
 - Problem solving
 - Changes to hospital environment/education given in acute phase of TBI
 - Bright light



CAUTION WITH MEDICATIONS

- > Often widely used for treatment of insomnia though not generally recommended
- > Some additional considerations for TBI:
 - In general sedating medications may impact adherence, participation in treatment
 - Avoid benzodiazepines
 - Consider limiting anticholinergic medications
 - Hypnotics not recommended as they can impair cognition further, increase dementia risk
- > Melatonin does have some evidence for insomnia in TBI



FUTURE DIRECTIONS FOR CBT-I/TBI

- > More research needed!
 - Physiology of sleep changes
 - Adaptation of current treatments to this population
 - Dissemination/different modalities, given dearth of providers trained
- > Consider optimal timing of CBT-I given sleep changes in TBI
- > Additional sleep interventions

(Dietch & Furst 2020, Ouellet, Beaulieu-Bonneau, Morin 2025)



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STRATEGIES FOR INCORPORATING CBT-I

- > **Any introduction of CBT-I concepts into a visit can help!**
- > Ask questions: Good sleep and medical/psychiatric histories can help identify comorbidities
- > Screening for sleep problems is recommended in this population!
 - Refer for further evaluation, including sleep study, if appropriate
 - > Complex/many comorbidities, current interventions not working
 - Don't forget about fatigue!
- > Repetition, routines, simplification are important for this population



STRATEGIES FOR INCORPORATING CBT-I

- > Remember, the environment plays a major role in maintenance
- > Give basic sleep hygiene education
- > Have patients track their sleep if interested; especially useful if tapering medications
- > Ask what patients do when unable to sleep – and encourage them to get out of bed/change environment
- > The constructive worry exercise is quick to explain and useful to many patients with sleep-related anxiety



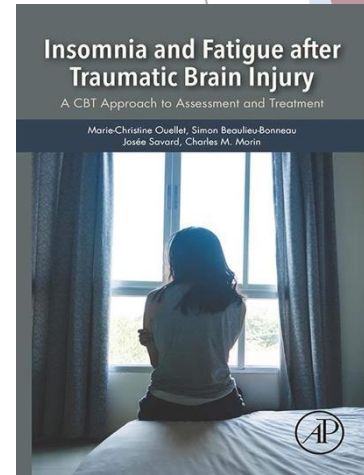
RESOURCES: GENERAL CBT-I

- > **Treatments that Work therapist manual and workbook**
 - <https://global.oup.com/academic/product/overcoming-insomnia-9780199339389?cc=us&lang=en&>
 - <https://global.oup.com/academic/product/overcoming-insomnia-9780199339402?lang=en&cc=us>
- > **CBT-I worksheets and logs**
 - <https://drcoleencarney.com/resources/>
- > **American Academy of Sleep medicine digital CBT-I resource list** (though note this is evolving; published March 6, 2024)
 - Recommended first if access to formal therapy is limited
 - <https://aasm.org/digital-cognitive-behavioral-therapy-for-insomnia-platforms-and-characteristics/>
- > **Somryst:** FDA-approved digital CBT-I prescription; has clinical trial data
 - <https://dtxalliance.org/products/somryst/>
- > **SleepioRx:** Recently FDA-approved as well, also with clinical trial data
 - <https://www.sleepiorx.com/>
- > **CBT-I coach app**
 - <https://mobile.va.gov/app/cbt-i-coach>



RESOURCES: TBI-SPECIFIC

- > TBI adaptations for CBT-I:
 - Ouellet, M.-C., Beaulieu-Bonneau, S., Savard, J., & Morin, C. M. (2020). *Insomnia and fatigue after traumatic brain injury: A CBT approach to assessment and treatment*. Elsevier Academic Press.
- > DBAS Scale:
 - [https://www.med.upenn.edu/cbti/assets/user-content/documents/Dysfunctional%20Beliefs%20and%20Attitudes%20About%20Sleep%20Scale%20\(DBAS\).pdf](https://www.med.upenn.edu/cbti/assets/user-content/documents/Dysfunctional%20Beliefs%20and%20Attitudes%20About%20Sleep%20Scale%20(DBAS).pdf)



QUESTIONS/COMMENTS?

Mackenzie J. Lind, MD, PhD
mj lind2@uw.edu



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