

# GETTING A GOOD NIGHT'S SLEEP A KEY TO AGING WELL

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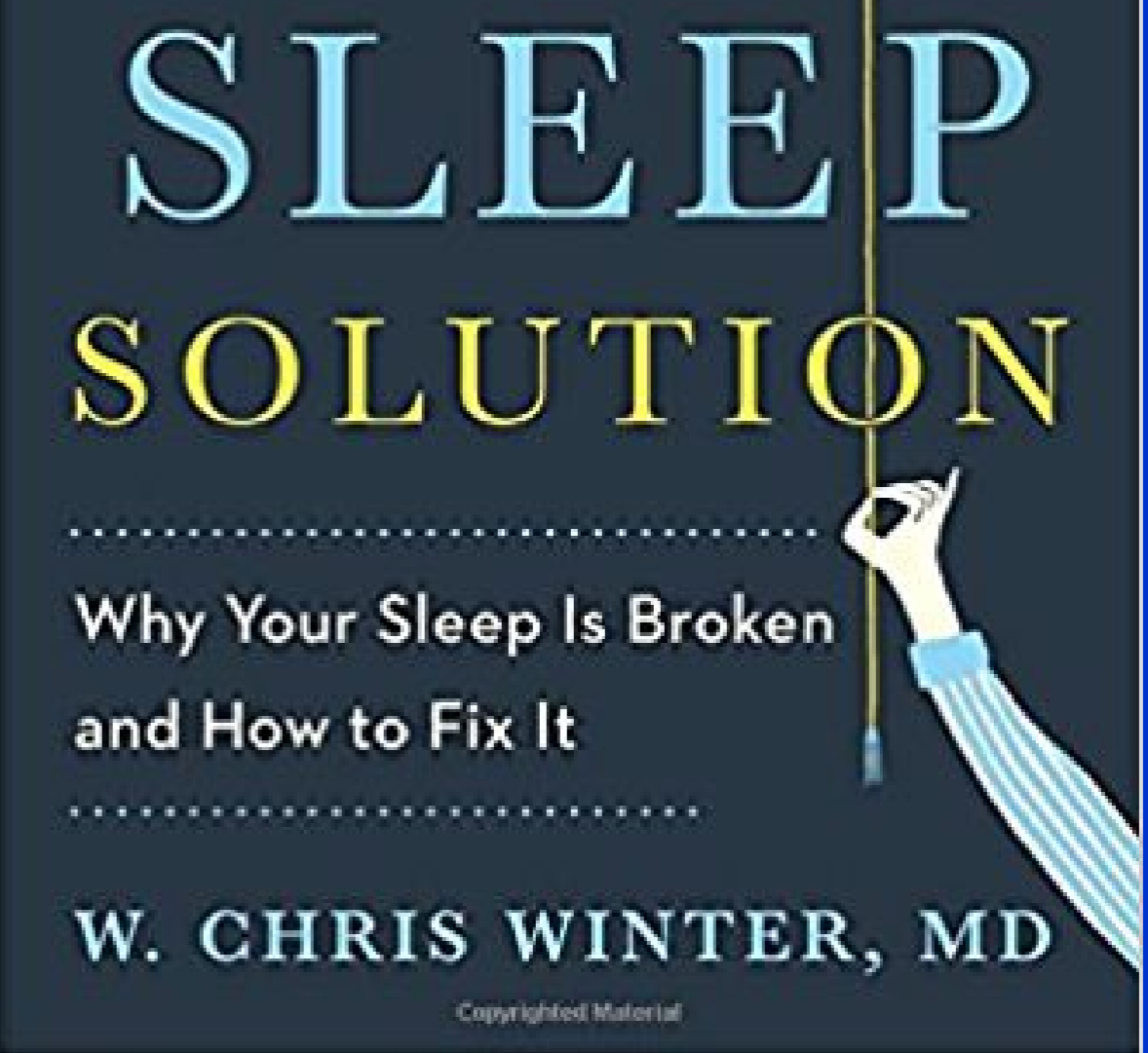
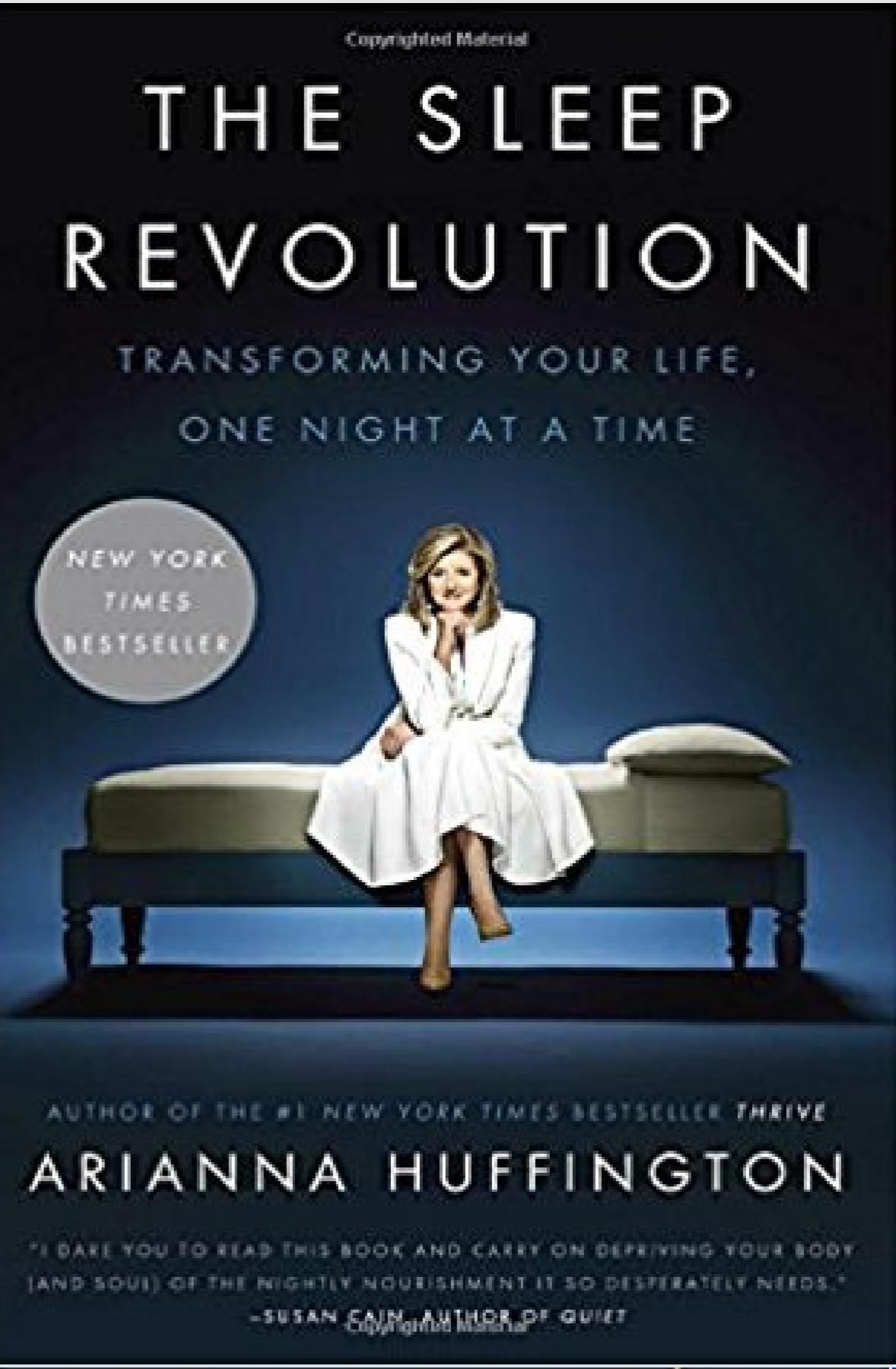
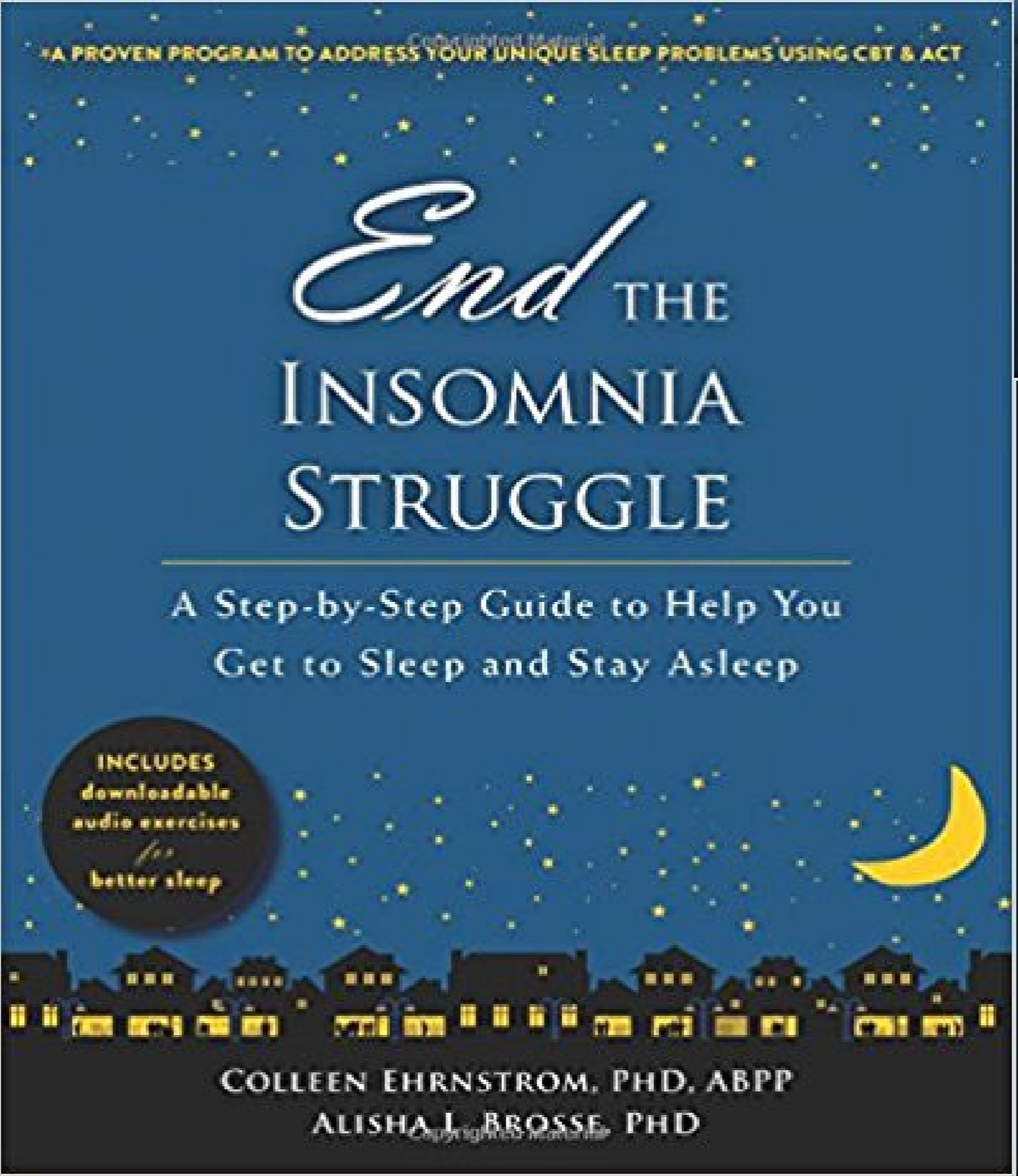
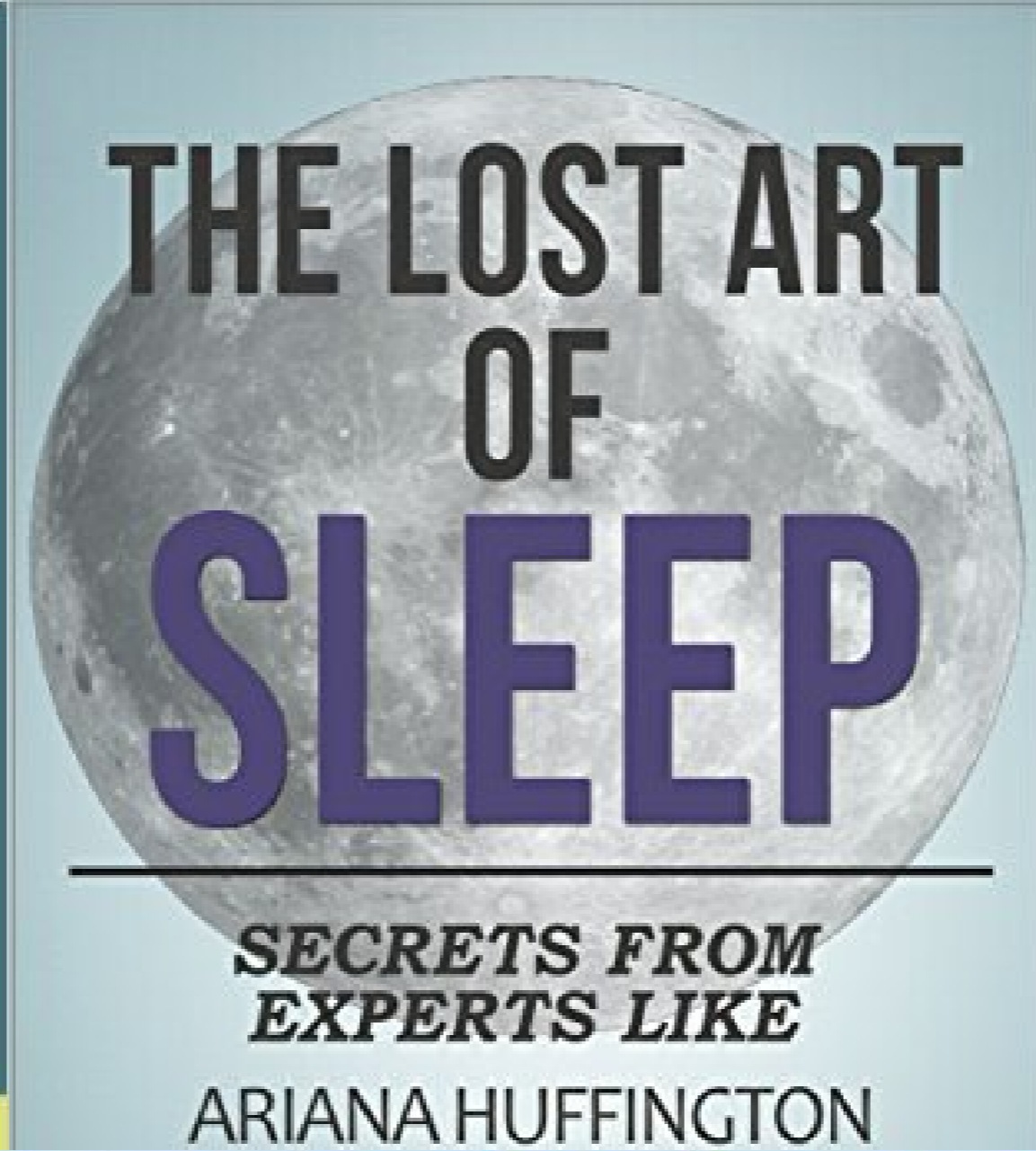
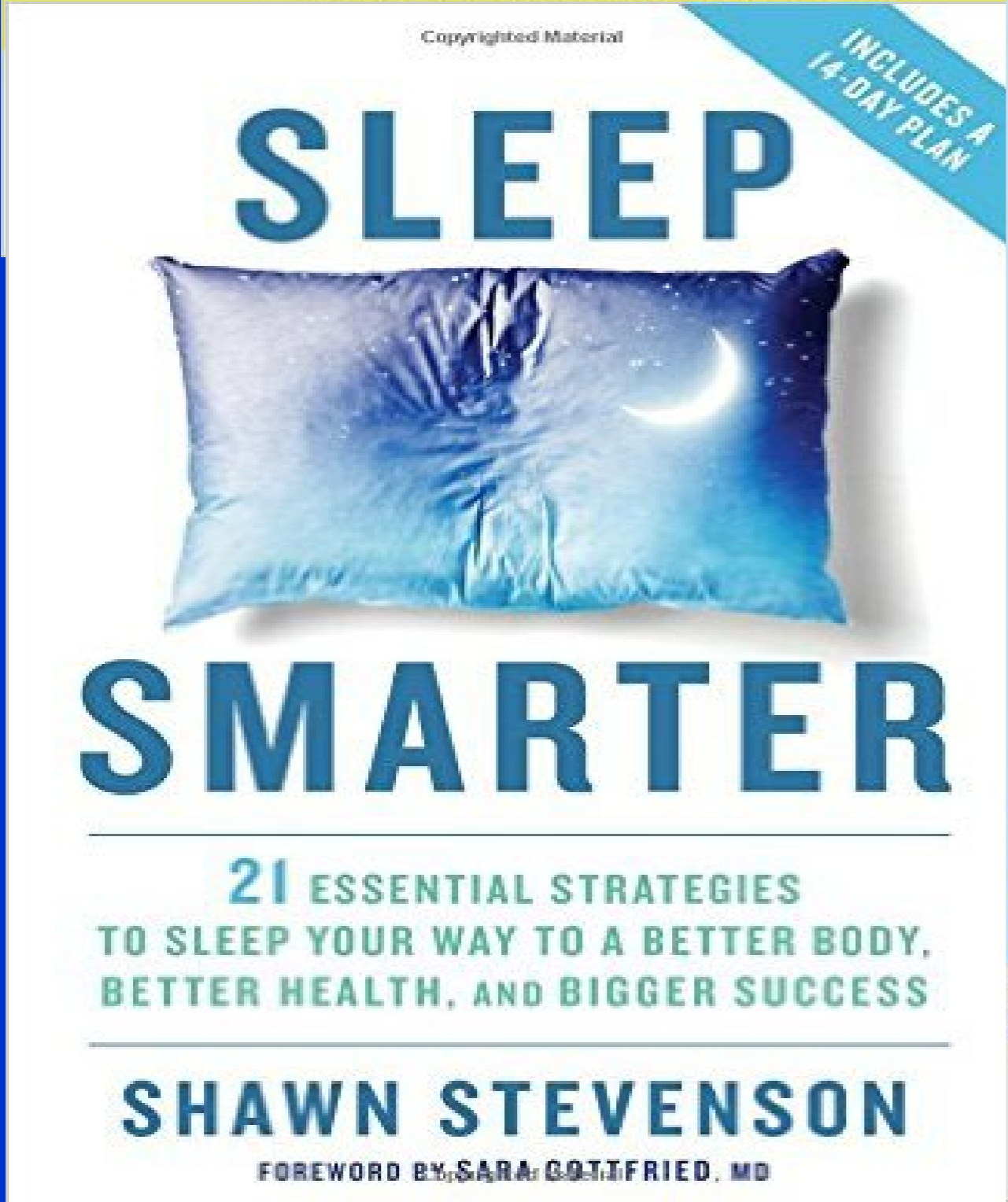
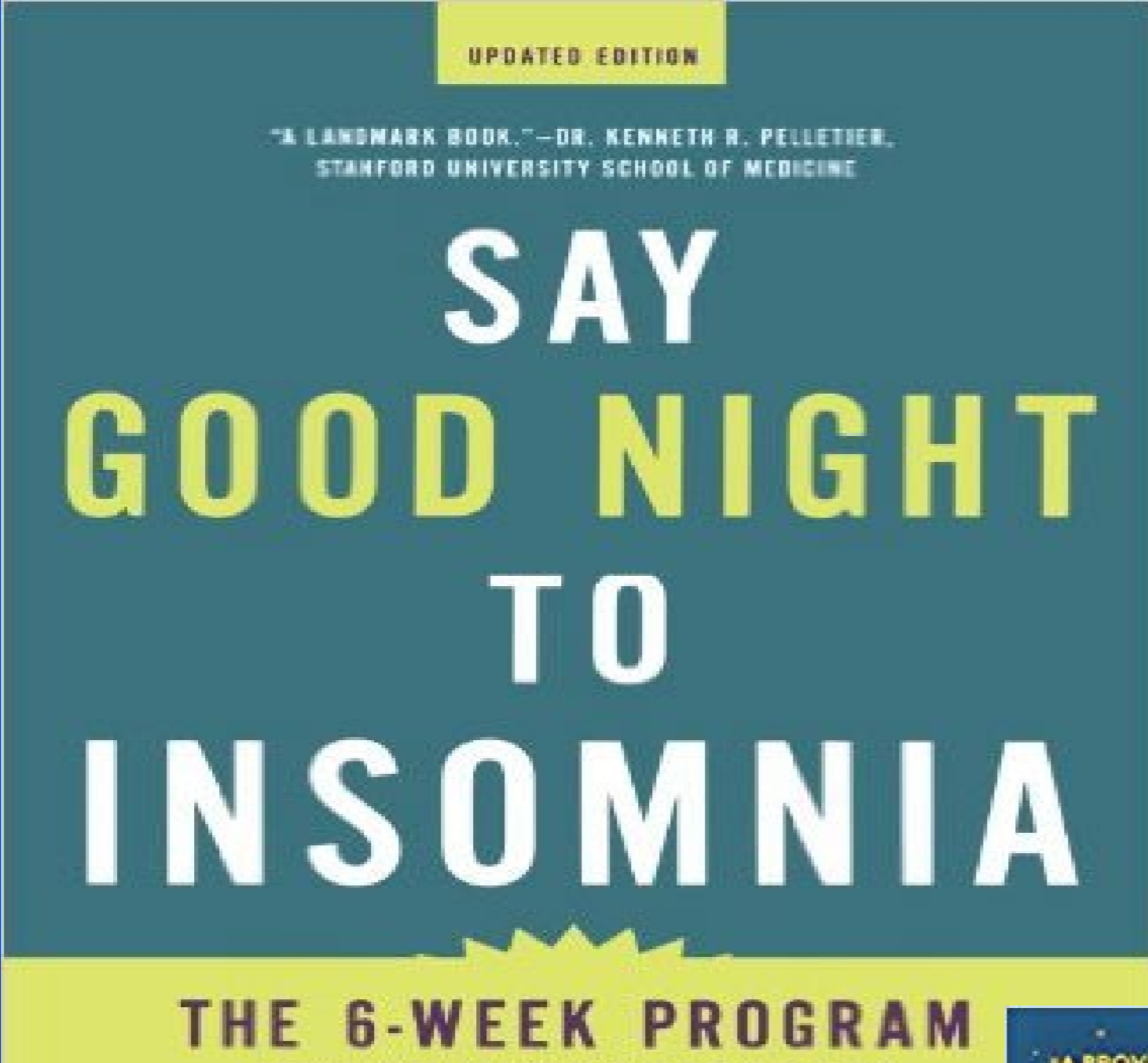
# Presentation Objectives

- **Appreciate the importance of sufficient sleep.**
- **Appreciate why we tend to get less sleep than we need.**
- **Understand the links between sleep, health and illness.**
- **Learn how a good night's sleep promotes healthy aging.**
- **Learn how to get a good night's sleep.**

**The Importance of Sufficient Sleep:**  
**A Sleep Infomercial**

**DO I HAVE A DEAL FOR YOU!**







# Why We Tend to Get Less Sleep than We Need

**THE REASONS WE ARE A SLEEP DEPRIVED  
SOCIETY**

**AND THE COSTS TO OUR DAYTIME FUNCTION  
AND TO OUR HEALTH**

*We shall have a busy day tomorrow, and I think we had better get all the sleep we can tonight. I am a firm believer in the restorative qualities of sleep, and always like to get at least seven hours of it, though I have often been compelled to put up with much less.*

General Ulysses Simpson Grant  
Evening before the second day of  
the Battle of the Wilderness.



# Why We Tend to Get Less Sleep than We Need

- **SOCIETAL FACTORS:**
  - **SLEEP IS “EASILY SACRIFICED”**
  - **ELECTRICITY HAS “BANISHED THE NIGHT”**
  - **SOCIETY IS NOW 24/7/52**
  - **SMART PHONES, SCREENS, SOCIAL MEDIA**





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# Causes of Insufficient Sleep in Aging

- **“Age-related” sleep change**
  - Changes in homeostatic sleep drive and circadian rhythm for wakefulness.
- **Co-morbid medical and psychiatric illnesses**
  - E.g.; Pain, Depression, Alzheimer’s disease, etc.
- **Primary sleep disorders**
  - OSA, RLS, RBD, CRD, etc.
- **Poor sleep habits and psychosocial factors**
  - Learned behaviors, environmental factors, etc.
- **Any combination of the above**



# Daytime Consequences of Insufficient Sleep

- **Adverse daytime and behavioral effects:**
  - **Impaired mood / increased irritability**
  - **Impaired concentration**
  - **Impaired vigilance**
  - **Impaired memory**
  - **Impaired problem solving**
  - **Excessive, intrusive daytime sleepiness**
  - **Increased risk of accidents and falls**

# Health Consequences of Insufficient Sleep

- **Increased risk of developing various illnesses**
  - **Obstructive sleep apnea:**
    - Hypertension, Cardiovascular disease, Cerebrovascular disease, Alzheimer's and vascular dementia
  - **Short sleep duration:**
    - Metabolic Syndrome > Type 2 Diabetes
  - **Insomnia:**
    - Alzheimer's dementia, Cerebrovascular disease\*, Pain syndromes, Depression, Anxiety, Alcohol Relapse

\*Sleeping less than five hours a night triples the risk of a stroke.

**Shi, Chen, Ma, Bao, Han, Wang, Shi, Vitiello and Lu.**  
**Sleep Disturbances Increase the Risk of Dementia:**  
**A Systematic Review and Meta-Analysis.**  
***Sleep Medicine Reviews 2017.***

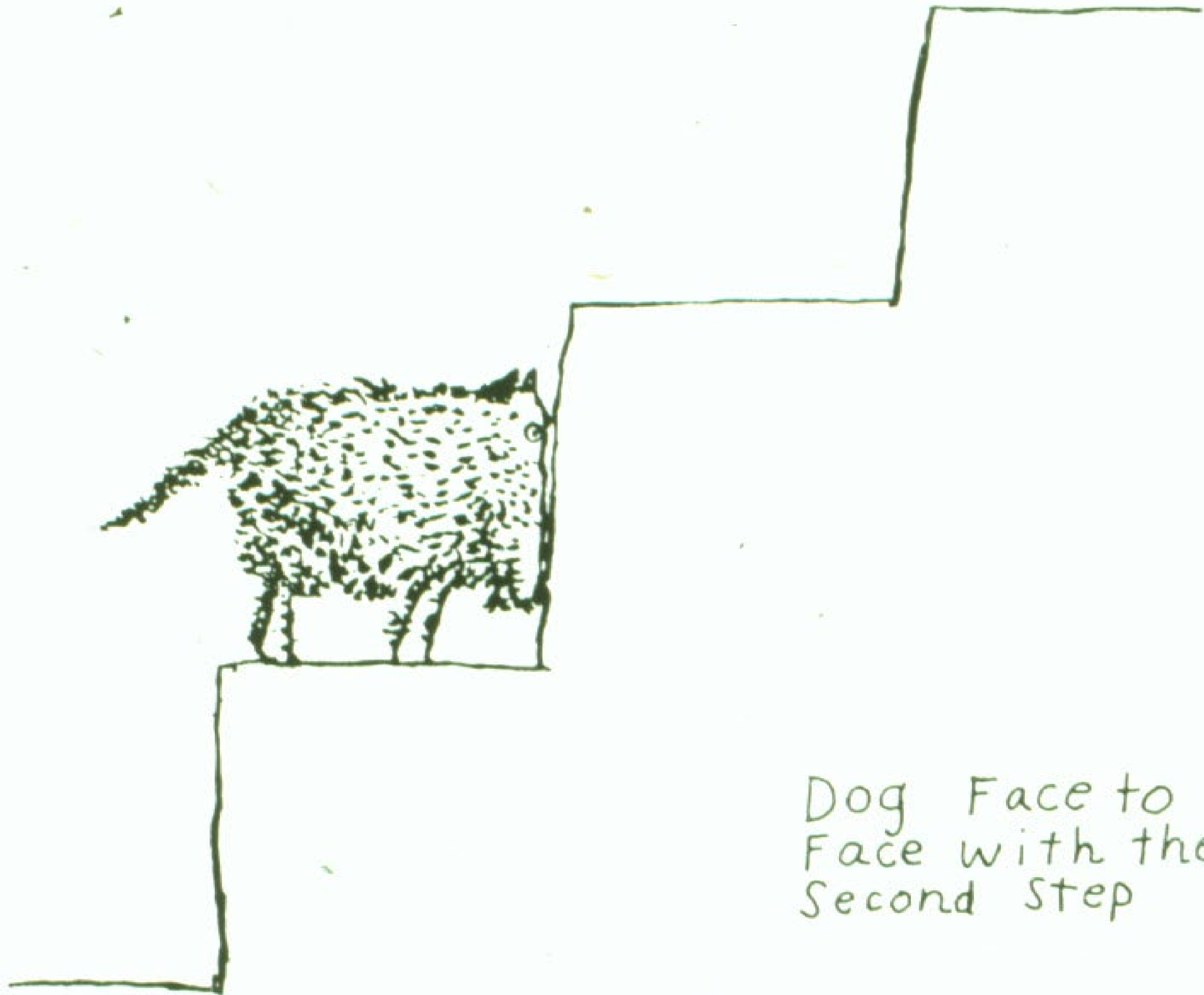
- 18 longitudinal studies, 246,786 baseline cases and 25,847 dementia cases at ~10-yr follow-up.
- Sleep disturbances increased the risk of incident all-cause (1.19), AD (1.76), and vascular (1.5) dementia.
- Insomnia increased the risk of AD (1.51) but not vascular or all-cause dementia.
- SDB increased the risk of all-cause (1.18), AD (1.2), and vascular (1.23) dementia.



# Sleep/Health Relationships are Complex

- **It is important to remember that sleep/health relationships are typically bidirectional, that is - a two-way street.**
- **Sleep can be both the cause and the effect of a sleep/health relationship.**
  - **Sleep can contribute to the development of a disease.**
  - **A disease can contribute to the development of disturbed sleep.**
  - **Both processes can occur, with different strengths at different times.**





Dog Face to  
Face with the  
Second Step

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## Age-Related Changes in Sleep Quality

- While epidemiological studies typically report that 40-50% of the elderly complain about significant and chronic sleep disturbance...
- It is important to remember that 50-60% of older adults do not complain.
  - Which suggests that the disturbed sleep seen in older adults is not the result of growing older, per se.
- Yet the evidence is clear that the sleep of these non-complainers has changed significantly with advancing age.

# Implications of Age-Related Sleep Changes

- If an older person complains of sleep problems but the only likely cause is age-related sleep change then education about what is normal sleep is crucial.
- “How fast can you run a 100-meter foot race?”

# Sleep Disturbance Co-morbid with Illness

- **Both acute and chronic illnesses increase in frequency with age.**
- **Sleep may be adversely affected:**
  - **Directly by the illness, per se.**
  - **Indirectly by consequences of and treatments for the illness:**
    - **Surgery/pain**
    - **Bed-rest/inactivity**
    - **Medications (Rx, OTC, other)**
      - **Caveat on the dangers of poly-pharmacy.**



# Treating Sleep Disturbance Co-morbid with Illness

- Previous wisdom - treat the illness and the “secondary” sleep disturbance will improve.
- The new wisdom - treat both the illness and the sleep disturbance, they are co-morbid.
- Effectively treating sleep may have beneficial impact on co-morbid illness:
  - Osteoarthritis and other pain syndromes.
  - Depression, GAD.
  - Other illnesses, e.g.; hypertension (?).

# Sleep Disturbance Resulting from a Primary Sleep Disorder

- **Insomnia\***
- **Obstructive Sleep Apnea**
- **Restless Legs Syndrome (RLS)**
  - **Periodic Leg Movements Disorder (PLMD)**
- **REM Behavior Disorder**
- **Irregular Sleep-Wake Rhythm (ISWR)**

# Causes and Treatment Strategies

- **Some sleep changes are a normal part of aging and education is key to effective treatment.**
- **If a primary sleep disorder is the cause of the sleep disturbance it should be treated directly.**
  - **Optimally at an AASM recognized sleep disorders clinic.**
- **If a sleep disturbance is co-morbid with an illness, both should be treated.**



## Other Treatments Strategies

- **Situations where a sleep disturbance is not wholly the result of age-related sleep change, health burden etc. or a primary sleep disorder like sleep apnea or restless legs are common.**
  - **Such sleep disruption can arise from a variety of causes and is typically maintained by the development of poor sleep habits and conditioned emotional responses, i.e., learning.**
  - **Such disruption may or may not occur co-morbidly.**
  - **These disruptions are usually chronic insomnias**

# Chronic Insomnia

- A. Complaint of dissatisfaction with sleep quantity or quality, accompanied by one (or more) of the following symptoms:**
- **Difficulty initiating sleep**
  - **Difficulty maintaining sleep characterized by frequent awakenings or problems returning to sleep after awakening**
  - **Early morning awakening with inability to return to sleep**
- B. The sleep difficulty causes significant distress or impairment.**
- C. The sleep difficulty occurs at least 3 nights per week.**
- D. The sleep difficulty is present for at least 3 months.**
- E. The sleep difficulty occurs despite adequate opportunity for sleep.**

**Pharmacologic Treatment of Insomnia Disorder: An Evidence Report for a Clinical Practice Guideline by the American College of Physicians**  
**Annals Internal Medicine. 2016;165(2):103-112.**

**Conclusions: 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 are not known. Pharmacotherapies for insomnia may cause cognitive and behavioral changes and may be associated with infrequent but serious harms.**



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

**Annals Internal Medicine. 2016;165(2):125-133.**

**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)**



# Cognitive-Behavioral Therapy for Insomnia (CBT-I)

- **CBT-I “core” techniques:**
  - **Sleep Education**
  - **Good Sleep Habits**
  - **Sleep Diary**
  - **Stimulus Control Therapy (SCT)\***
  - **Sleep Restriction Therapy (SRT)\***
- **CBT-I may also include:**
  - **Relaxation Techniques**
  - **Mindfulness**
  - **Cognitive Restructuring**

# Sleep Education

- **Accurate, fact-based information about sleep, for example:**
  - **What is normal sleep for a given age.**
  - **What are the consequences of mild sleep loss.**
- **Addresses erroneous assumptions, misperceptions and dysfunctional beliefs about sleep.**

# Sleep Education -Web Resources

<http://healthysleep.med.harvard.edu/healthy>

<http://www.sleepeducation.com/>

<http://www.aasmnet.org/>

<http://www.sleepfoundation.org/>

# Good Sleep Habits

- **The behavioral and environmental factors, typically under the individual's control, that can maximize or compromise sleep quality.**

**Vitiello. Effective Treatment of Sleep Disorders in Older Adults.  
*Clinical Cornerstone*, 2(5): 16-27, 2000.**



# Good Sleep Habits

- **Maintain habitual bed and rise times.**
  - Particularly, get up at the same time each day.
  - Keep your sleep aligned with your body clock.
- **Go to bed when truly sleepy.**
  - If sleep doesn't come within 15-20 minutes, get out of bed and do something relaxing until tired and then return to bed.
- **Explore the usefulness of napping.**
  - Daytime naps may decrease nighttime sleep need.

# Good Sleep Habits

- **Make your bedroom a sleep-friendly environment.**
  - **Lighting, bedding, temperature, etc.**
- **Develop relaxing bedtime rituals.**
- **Don't be a nighttime clock watcher.**
- **Schedule a regular daytime “worry time”.**
- **Exercise regularly and moderately.**
- **Make light work for you.**
  - **Seek daytime natural light, avoid nighttime bright light.**

## Good Sleep Habits

- **Avoid rich foods late in the evening.**
- **Explore the usefulness of a light bedtime snack.**
  - **Try snacking on foods that promote sleep:**
    - **E.g., milk, bananas, turkey, cheese, peanut butter.**
- **Avoid caffeine, alcohol and tobacco.**
- **Be aware that OTC and prescription medications may adversely affect sleep.**



# Sleep Diary

- **Sleep Diary is a record of a person's sleeping and waking times with related information, usually over a period of several weeks.**
- **Useful for revealing patterns and tracking progress**
- [http://en.wikipedia.org/wiki/Sleep\\_diary](http://en.wikipedia.org/wiki/Sleep_diary)
- <http://sleepfoundation.org/sleep-diary/SleepDiaryv6.pdf>



## Benson Relaxation Response - Deep Breathing

- **Sit/lie quietly and comfortably with eyes closed.**
- **Relax muscles bottom to top.**
- **Slowly and deeply breathe in and out through your nose (a word/sound may be used with the exhale).**
- **Attend only to your breathing (and, if used, the word/sound).**
- **If distracting thoughts occur, do not focus on them, simply return your attention to breathing.**
- **Don't worry, maintain a passive attitude and permit relaxation to occur at its own pace.**

<https://www.integration.samhsa.gov/health-wellness/wham/relaxation-response>

# Cognitive-Behavioral Therapy for Insomnia (CBT-I)

- **“Core” techniques:**
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  - **Good Sleep Habits**
  - **Sleep Diary**
  - **Stimulus Control Therapy (SCT)\***
  - **Sleep Restriction Therapy (SRT)\***
- **May also include:**
  - **Relaxation Techniques**
  - **Mindfulness**
  - **Cognitive Restructuring**

# Cognitive-Behavioral Therapy for Insomnia (CBT-I)

- CBT-I improves both short and long term insomnia.
- CBT-I is efficacious for both uncomplicated insomnia but also for co-morbid insomnia.
- CBT-I based improvements in sleep may also result in improvements in co-morbid illnesses.



# Sleep and CBT-I Internet Resources

- <http://www.cbtforinsomnia.com>
- <https://www.sleepio.com/>
- <http://www.sleepeducation.com/>
- <http://www.sleepfoundation.org/>
- <http://www.aasmnet.org/>
- <http://www.med.upenn.edu/cbti/>
- <http://www.nhlbi.nih.gov/health/prof/sleep/index.htm>
- <http://www.behavioralsleep.org/>
- <https://www.thesleepschool.org/insomnia>



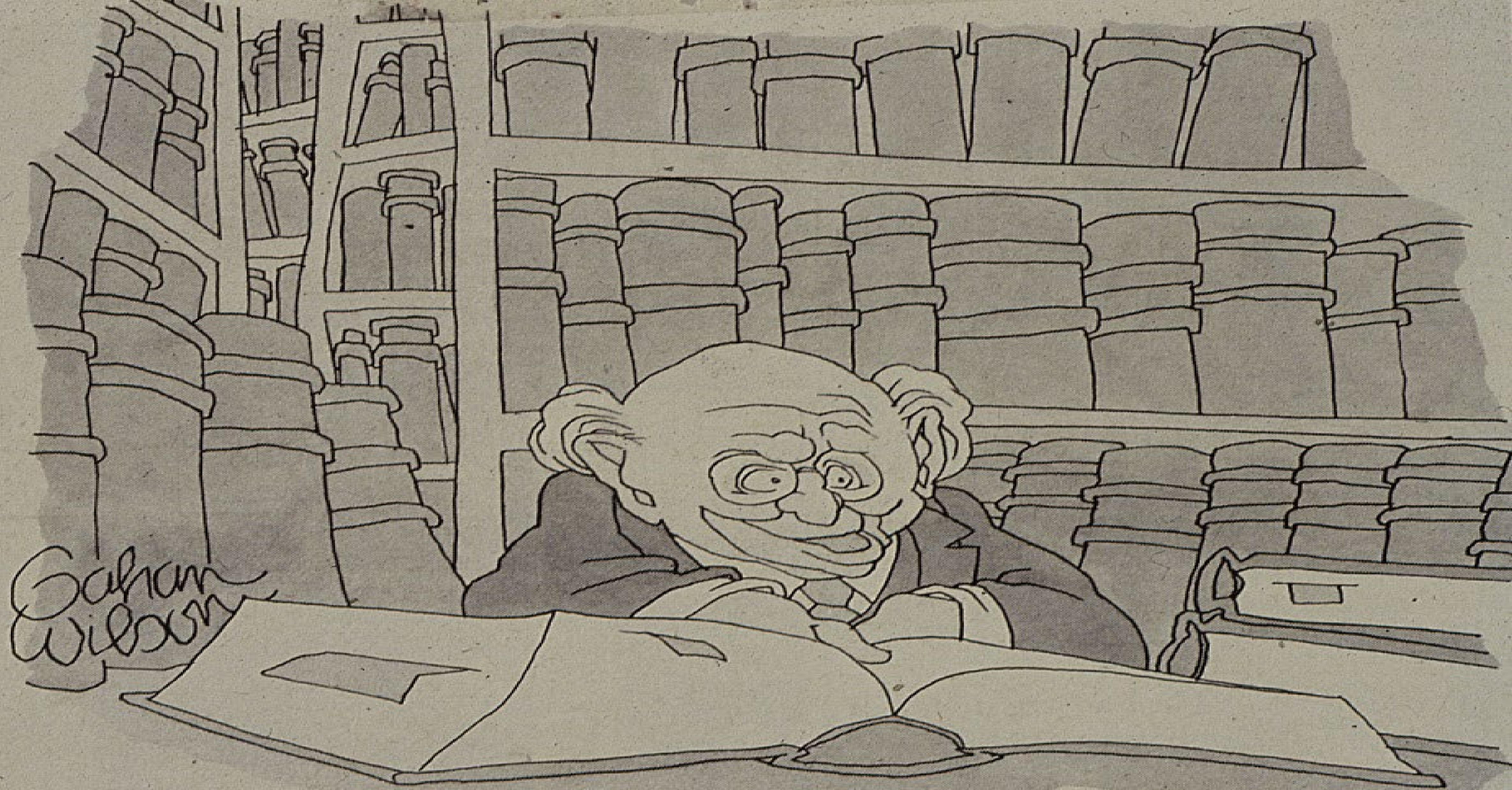
# Sleep, Insomnia and CBT-I Books

- Edinger JD, Carney CE. *Overcoming Insomnia: A Cognitive-Behavioral Therapy Workbook*. Oxford University Press, 2014.
- Ehrnstrom C, Brosse AL. *End the Insomnia Struggle*. New Harbinger Press, 2016
- Silberman S, Morin C. *The Insomnia Workbook: A Comprehensive Guide to Getting the Sleep You Need*. New Harbinger Press, 2008.
- Meadows, G. *The Sleep Book*. London: Orion House, 2014.
- Jacobs, G.D. *Say Good Night to Insomnia*. Tantor Media Inc., 2018 (audiobook).

# Locating a CBT-I Practitioner

- **Regional Sleep Centers**
  - American Academy of Sleep Medicine
  - <http://www.aasmnet.org/>
- **Washington Psychological Association**
  - <http://www.wapsych.org/>
- **The Society of Behavioral Sleep Medicine**
  - <http://www.behavioralsleep.org/>





*"By God, for a minute there it suddenly all made sense!"*

# The Take-home Messages

- **Sufficient sleep is a pillar of good health.**
- **Sleep disturbances in aging can result from multiple causes.**
- **Never assume that a sleep complaint in an older adult is “merely” the result of getting older, as it typically is not.**
- **Sleep education can frequently be helpful.**
- **If the sleep disturbance is co-morbid with a health burden, treat both the illness and the sleep disturbance.**
- **If sleep is disturbed by a primary sleep disorder, treat the sleep disorder directly.**



# The Take-home Messages

- **In almost all cases of sleep disturbance and especially those that appear to be chronic insomnia, optimize sleep habits and consider CBT-I.**
- **Effectively treating sleep disturbance may have beneficial impact on co-morbid illness (e.g.; pain syndromes, depression, etc.).**
- **There are effective treatments for most of the sleep disturbances experienced by older adults.**

## The Ultimate Take-Home Message

**Growing older does not mean  
sleeping poorly!**



# QUESTIONS?

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