



IMPORTANCE OF SLEEP

40TH ANNUAL JUDGES AND ATTORNEYS SUBSTANCE ABUSE AND ETHICS SEMINAR

ALLISON WILKERSON, PHD, DBSM

MEDICAL UNIVERSITY OF SOUTH CAROLINA

SLEEP AND ANXIETY TREATMENT AND RESEARCH DIVISION

Objectives



Improve understanding of benefits of sufficient sleep and consequences of insufficient sleep



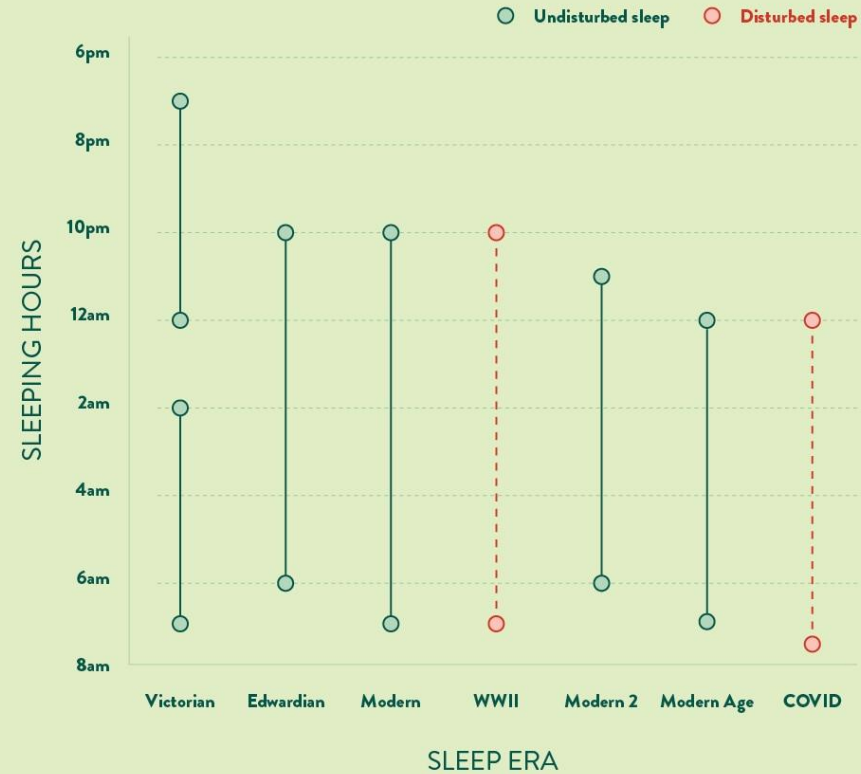
Identify 4 separate sleep problems



Provide options for practical daily practices to optimize sleep for those in high intensity work environments

A HISTORY OF SLEEP

Sleeping hours throughout history



For the full report visit
hollandandbarrett.com/shop/health-wellness/sleep-relaxation/history-of-sleep

Holland & Barrett

THE SLEEP REVOLUTION

TRANSFORMING YOUR LIFE,
ONE NIGHT AT A TIME



ARIANNA
HUFFINGTON

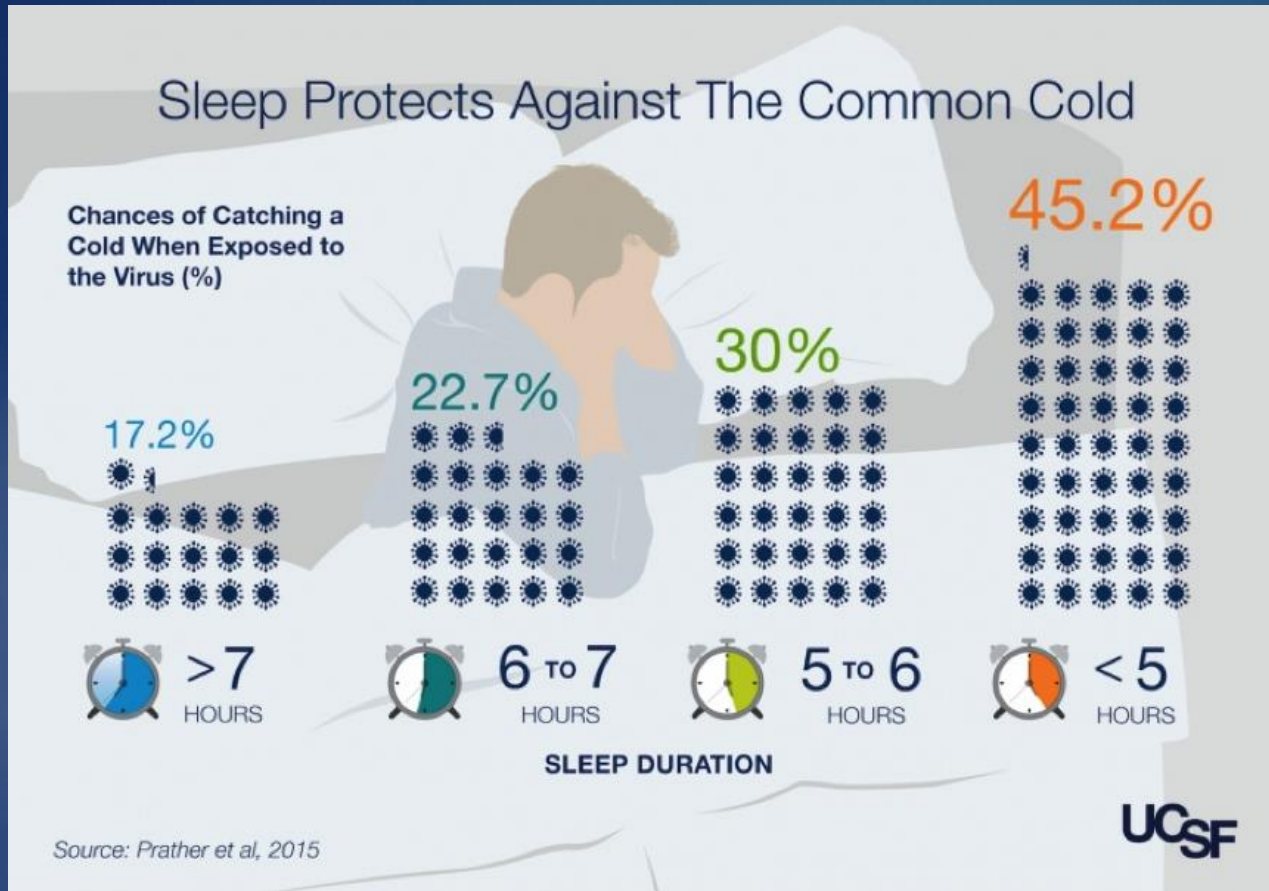
AUTHOR OF THE #1 NEW YORK TIMES BESTSELLER *THRIVE*



The Performance Triad
challenges you to enhance your health!



Sleep, Activity, and Nutrition (SAN)
are vital components of healthy living.

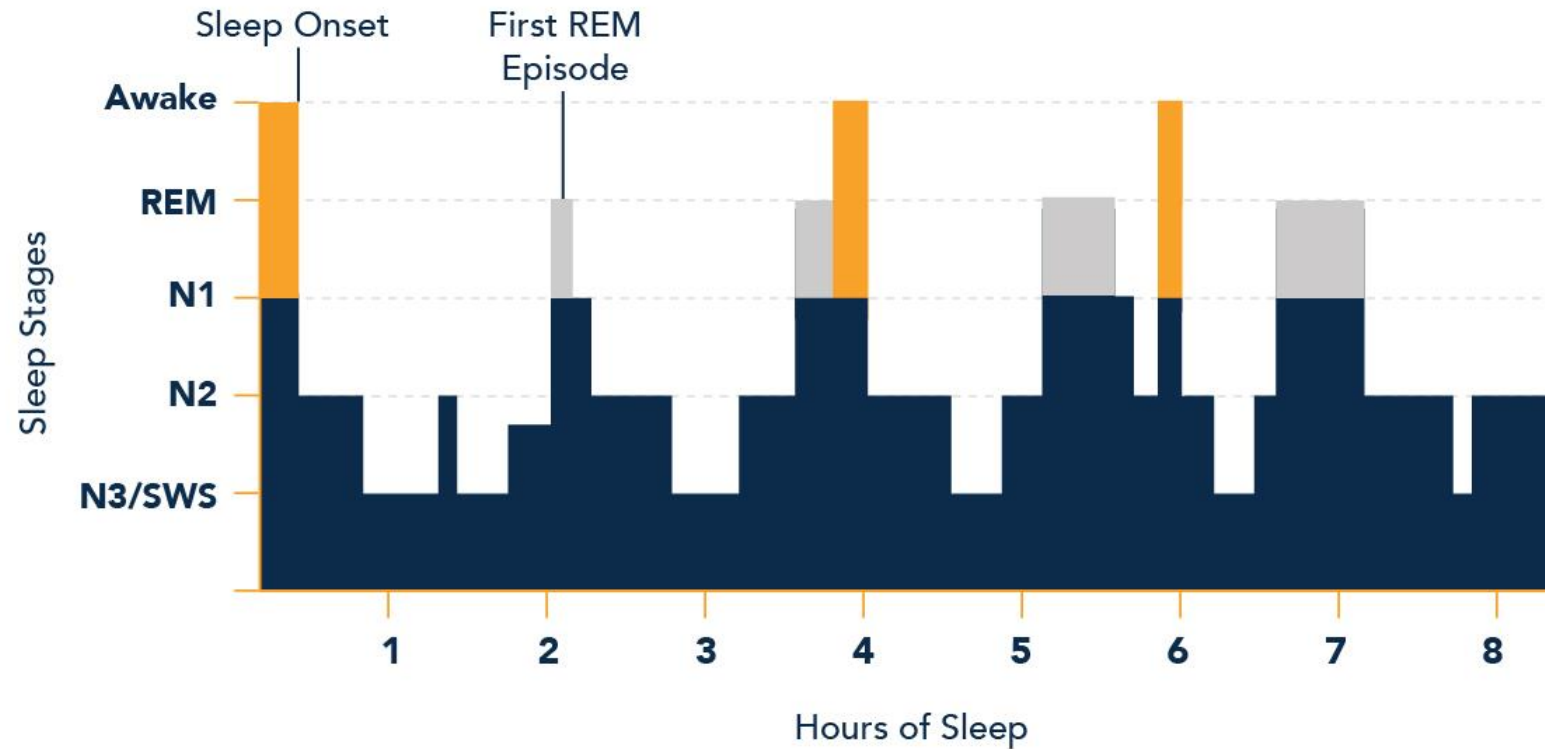


Benefits of sleep



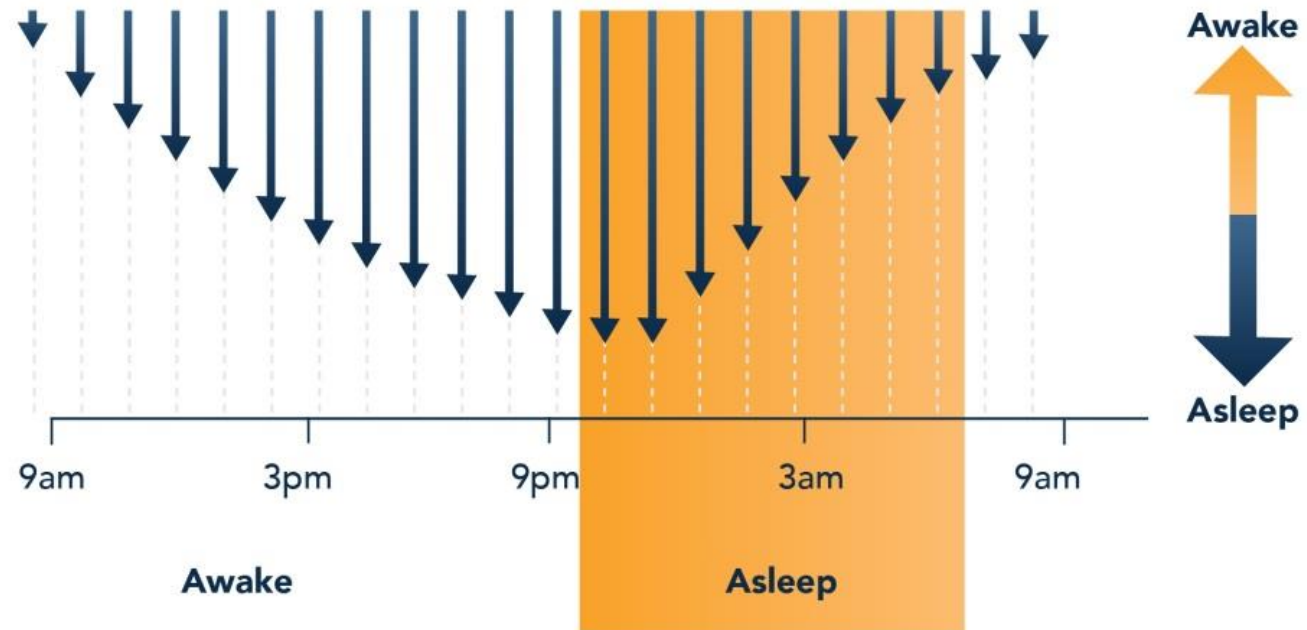
Benefits of sleep

A TYPICAL NIGHT OF SLEEP IN A YOUNG ADULT

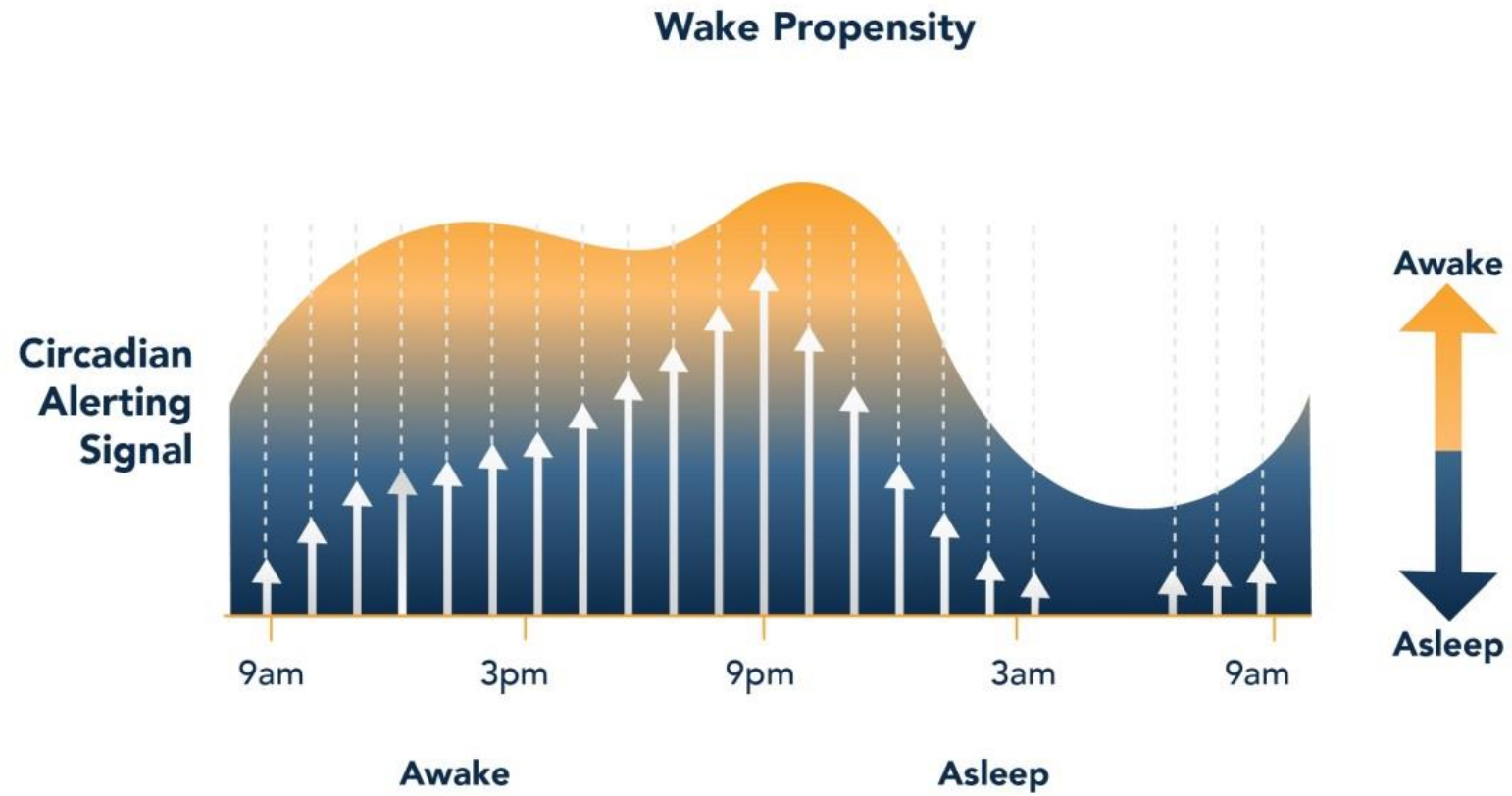


Adapted from Boselli, Parrino, Smerieri, & Terzano, 1998

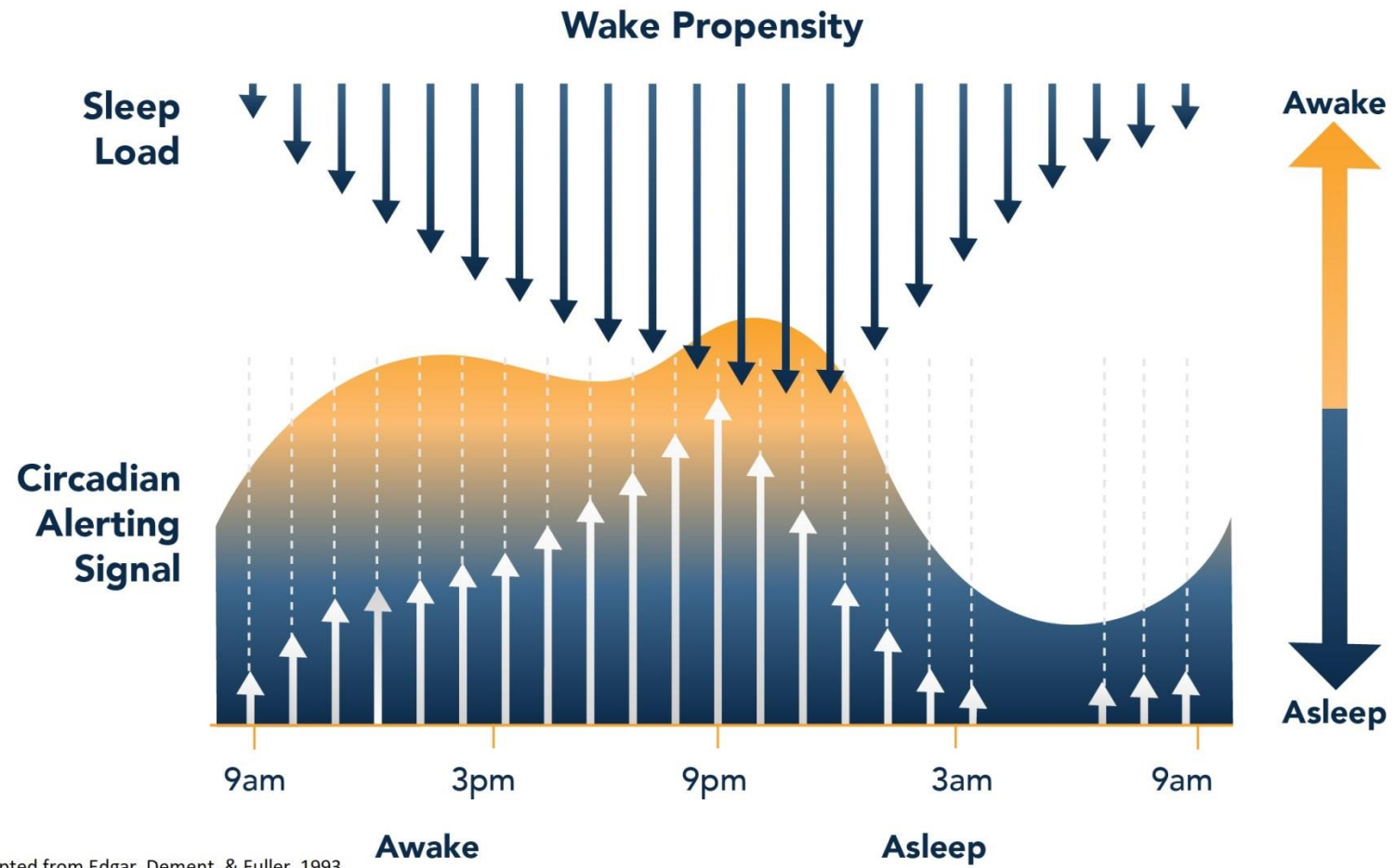
Sleep Load



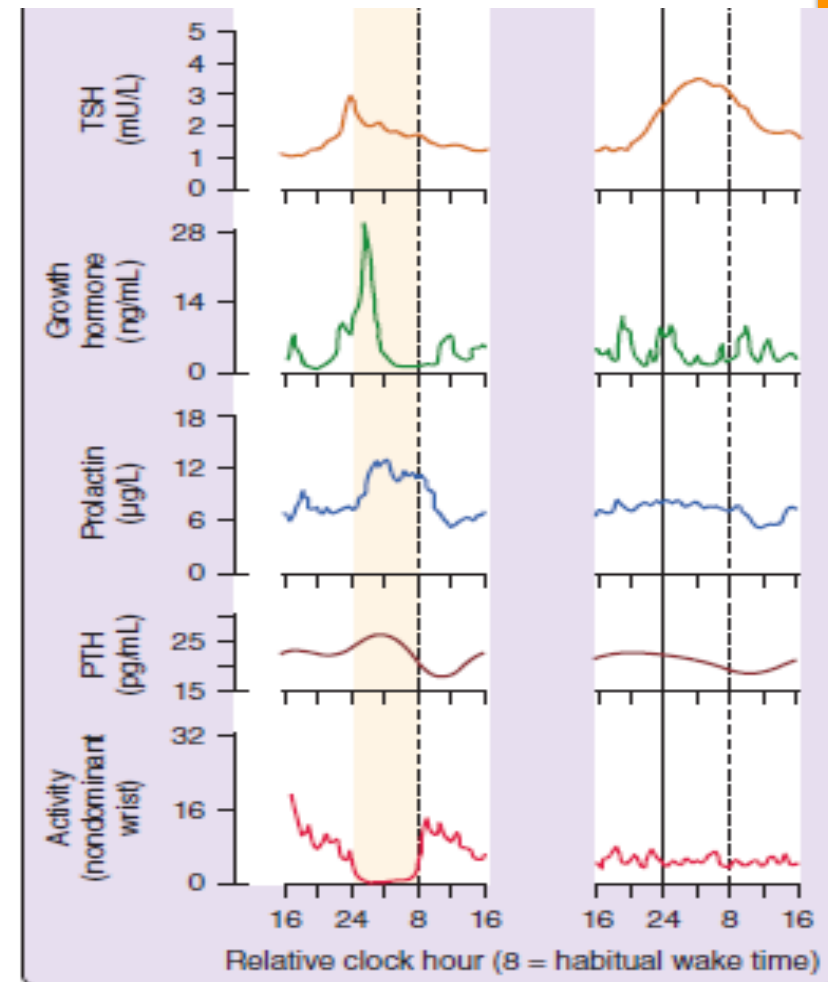
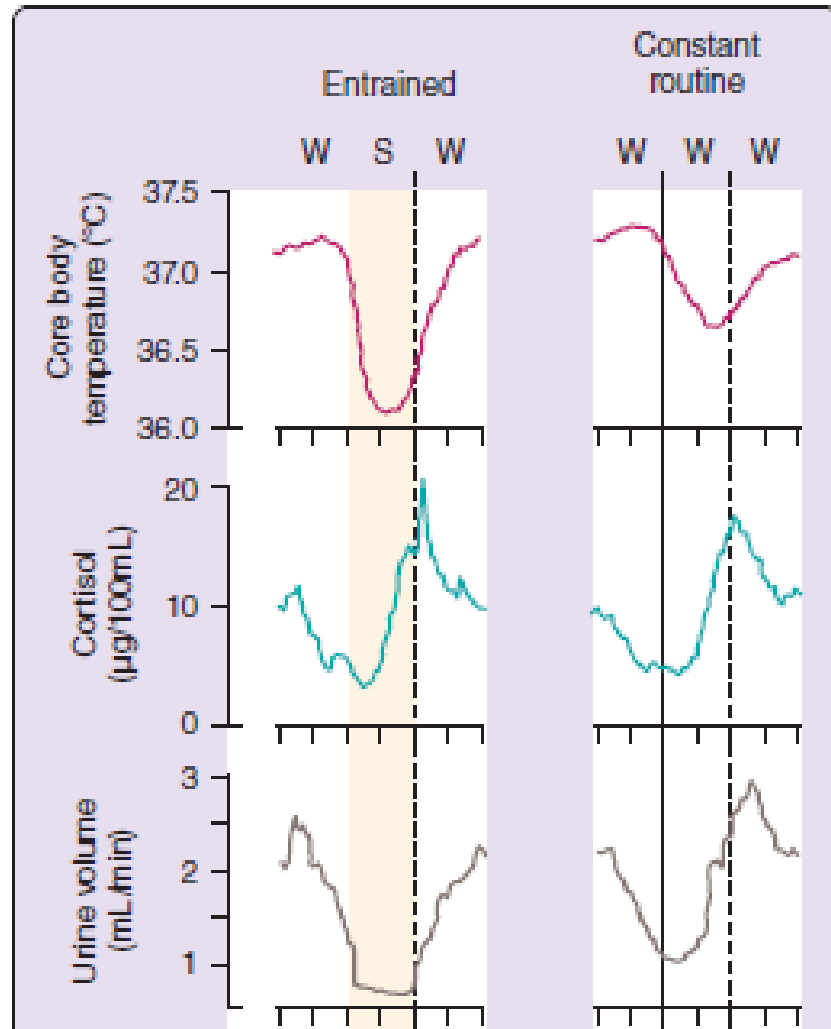
Adapted from Hastings, Neill, & Maywood, 2007



Adapted from Edgar, Dement, & Fuller, 1993

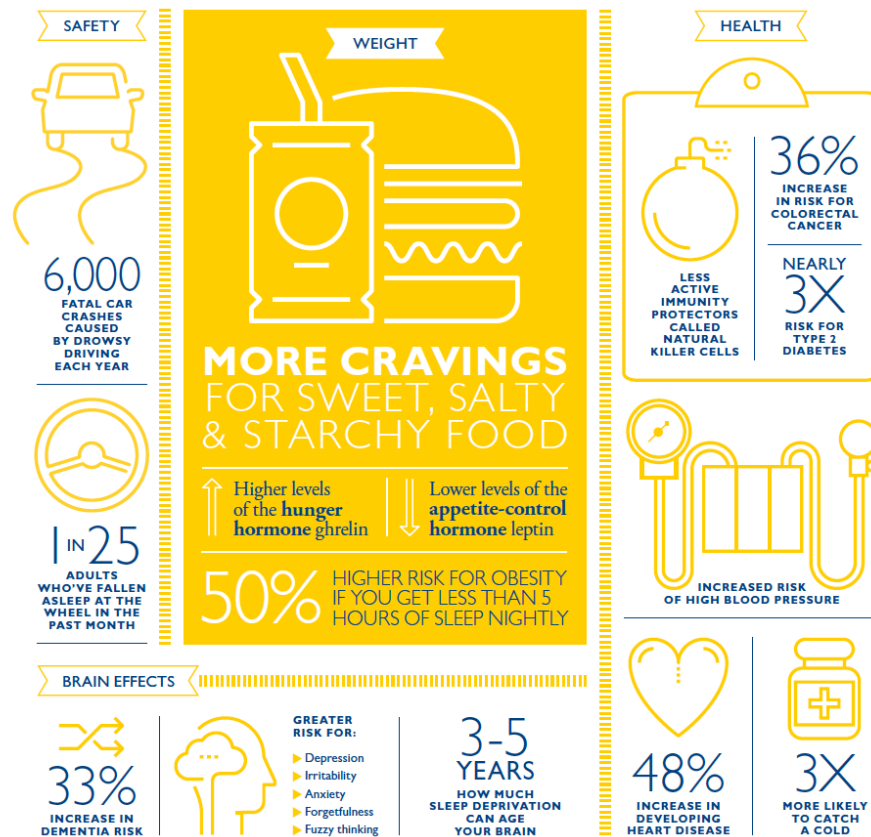


Adapted from Edgar, Dement, & Fuller, 1993



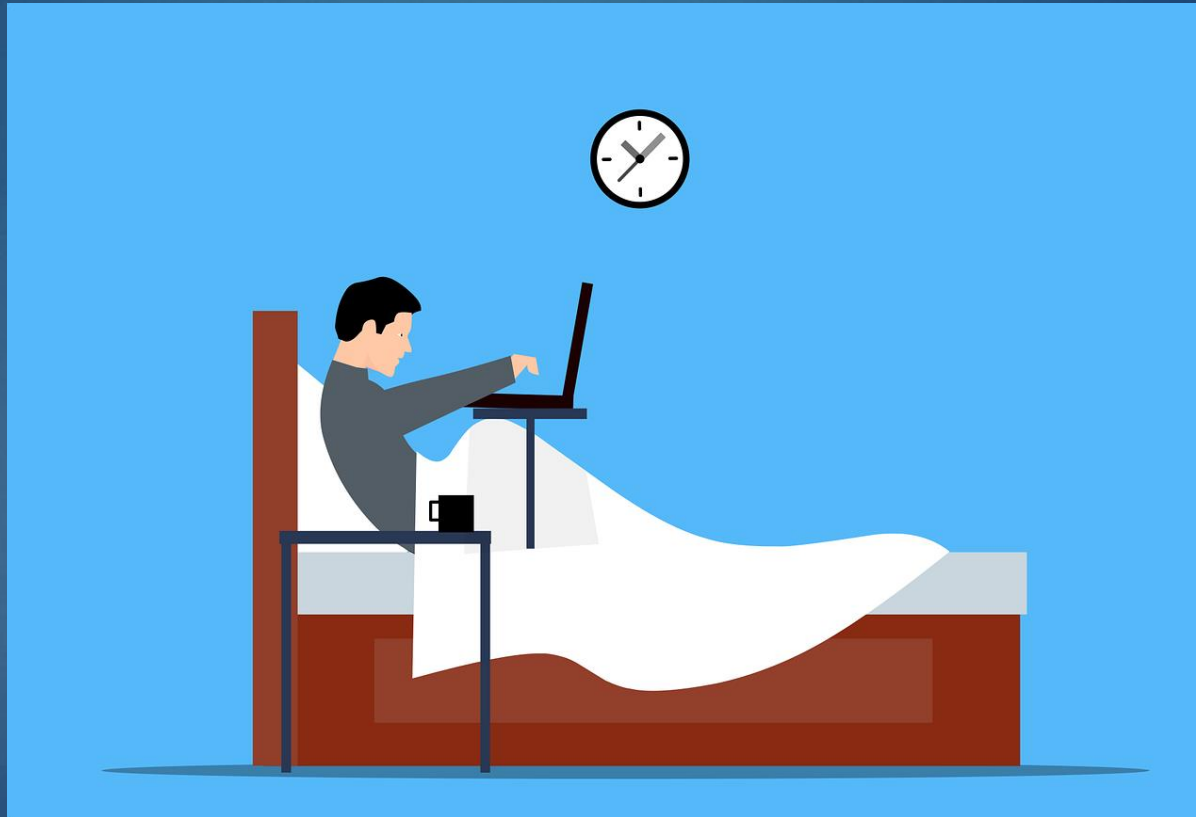
SLEEP DEPRIVATION EFFECTS

Lack of sleep is a health issue that deserves your attention and your doctor's help. Not getting enough sleep—due to insomnia or a sleep disorder such as obstructive sleep apnea, or simply because you're keeping late hours—can affect your mood, memory and health in far-reaching and surprising ways, says Johns Hopkins sleep researcher Patrick Finan, Ph.D. Sleep deprivation can also affect your judgment so that you don't notice its effects.

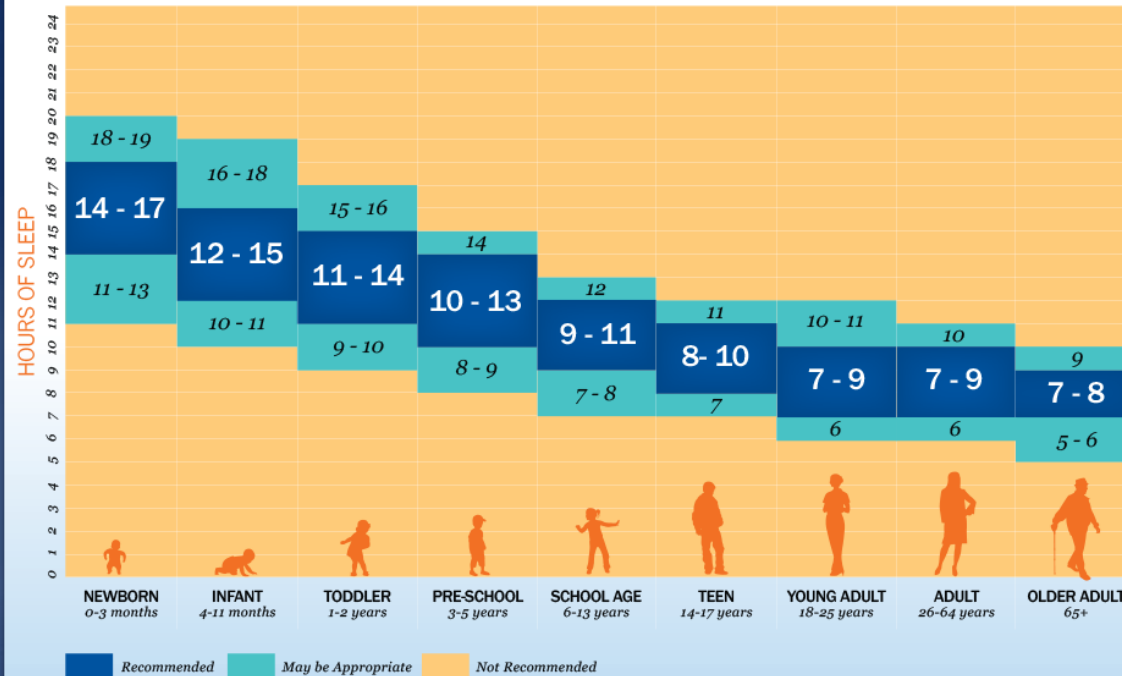


Consequences of lack of healthy sleep

4 Common sleep problems (.. And what to do about them)



SLEEP DURATION RECOMMENDATIONS



SLEEPFOUNDATION.ORG | SLEEP.ORG

Hirshkowitz M, The National Sleep Foundation's sleep time duration recommendations: methodology and results summary, Sleep Health (2015), <http://dx.doi.org/10.1016/j.sleh.2014.12.010>

First Things First: Quantity AND Quality

1) Situational Sleep Deprivation



4 Common sleep problems (.. And what to do about them)

- ▶ The problem: Sleep deprivation
 - ▶ How much sleep is needed?
 - ▶ What are signs of sleep deprivation?
- ▶ Potential solutions:
 - ▶ Allowing longer sleep window
 - ▶ Strategic napping

1) Situational Sleep Deprivation



2) Chronic Insomnia

4 Common sleep problems (.. And what to do about them)

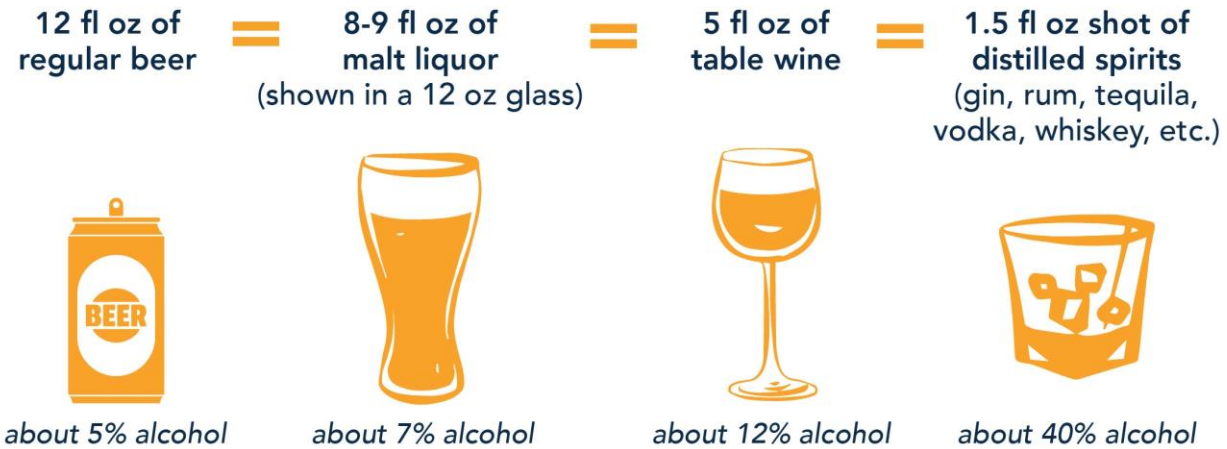
- ▶ The problem: Insomnia

- ▶ Difficulty falling and/or staying asleep

- ▶ Potential solutions:

- ▶ Cognitive behavioral therapy for insomnia
 - ▶ Relaxation
 - ▶ Medications

WHAT IS A STANDARD DRINK?



Adapted from NIAA, Alcohol Health

Each beverage portrayed above represents one standard drink of "pure" alcohol, defined in the United States as 0.6 fl oz or 14 grams. The percent of pure alcohol, expressed here as alcohol by volume (alc/vol), varies within and across beverage types. Although the standard drink amounts are helpful for following health guidelines, they may not reflect customary serving sizes.

Alcohol and insomnia

1) Situational Sleep Deprivation

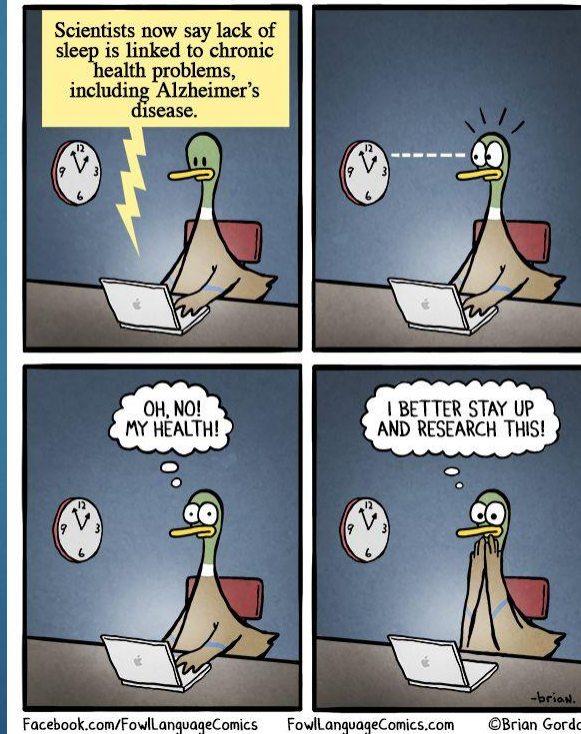


HOW WELL I SLEEP



2) Chronic Insomnia

3) Circadian Misalignment



4 Common sleep problems (.. And what to do about them)

- ▶ The problem: Circadian misalignment

- ▶ Night owls
- ▶ Morning larks

- ▶ Potential solutions:

- ▶ Adjusting work schedule where possible
- ▶ Timing melatonin and bright light to adjust circadian rhythm

1) Situational Sleep Deprivation



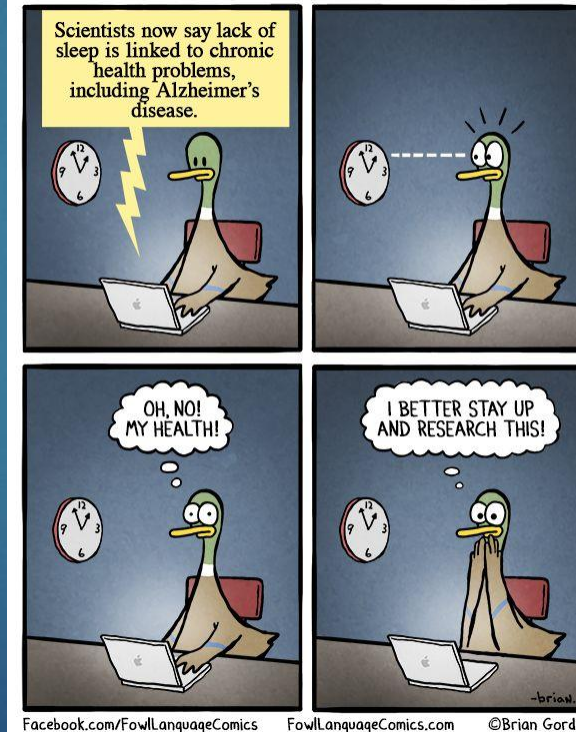
HOW WELL I SLEEP



2) Chronic Insomnia



3) Circadian Misalignment



4) Sleep apnea



ME-TIME



4 Common sleep problems (.. And what to do about them)

▶ The problem: Sleep apnea

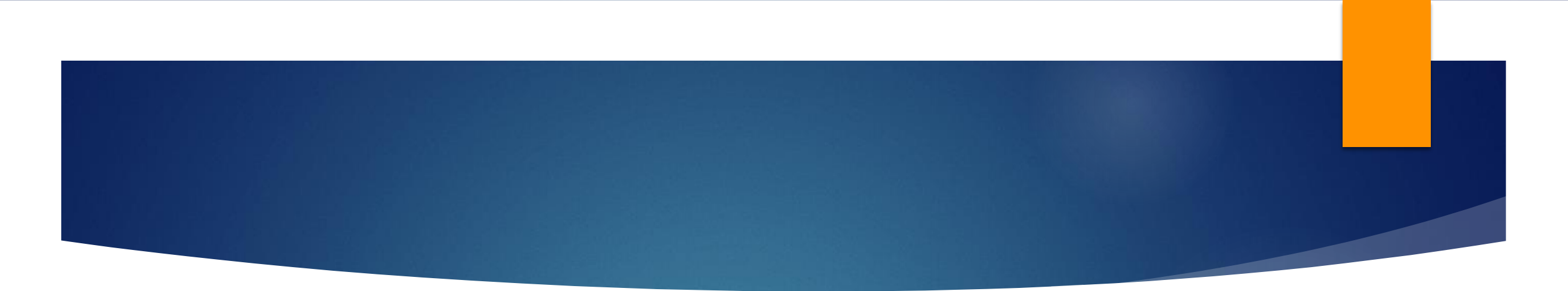
- ▶ Lack of ability to breathe freely during sleep resulting in shallow, non-restorative sleep
- ▶ Often results in non-refreshing sleep and sleepiness during the day
- ▶ Requires sleep study

▶ Potential solutions:

- ▶ CPAP/BiPap
- ▶ Mandibular device
- ▶ Upper airway stimulator



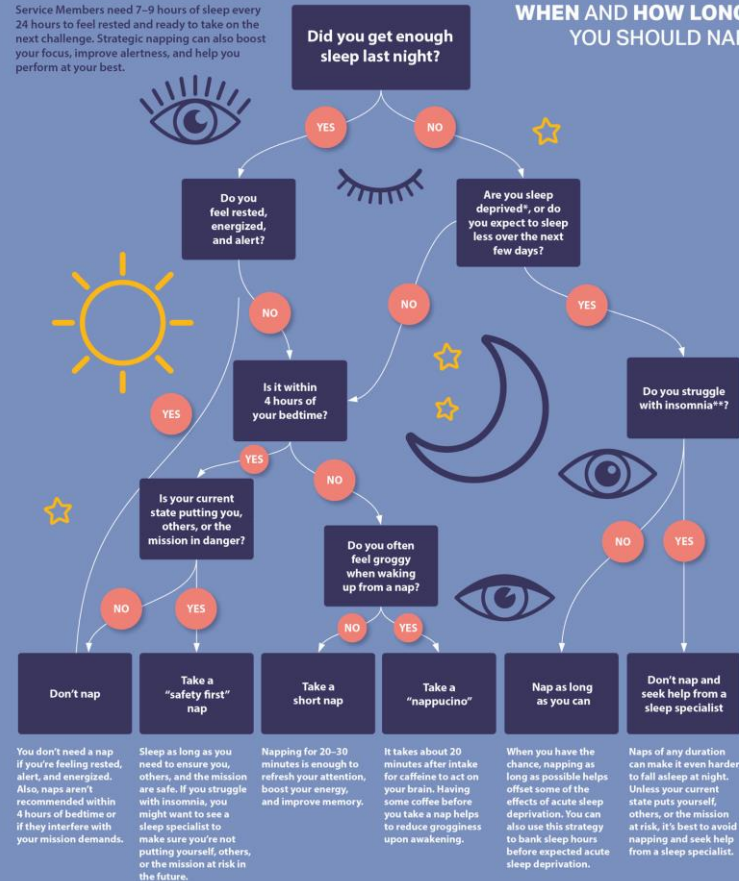
Questions?

- 
- ▶ All slides below this are for use in response to FAQs I get and try to be ready for

NAPPING FOR MILITARY PERFORMANCE

Service Members need 7-9 hours of sleep every 24 hours to feel rested and ready to take on the next challenge. Strategic napping can also boost your focus, improve alertness, and help you perform at your best.

WHEN AND HOW LONG YOU SHOULD NAP



*Sleep deprivation happens when you consistently sleep fewer hours than needed. It can be over a couple of weeks (acute) or over the years (chronic). Since sleep deprivation relates to sleeping less than you need over time, you can still be sleep-deprived—even if you got enough sleep the night before.

**Insomnia is defined as having trouble falling asleep, having trouble staying asleep and awakening frequently during the night, waking up earlier than desired, having a nonrestorative sleep, or experiencing daytime impairment in performance.



CHAMP

Center for Health and Military Performance

HUMAN PERFORMANCE RESOURCES by CHAMP | HPRC-online.org

To nap or not to nap

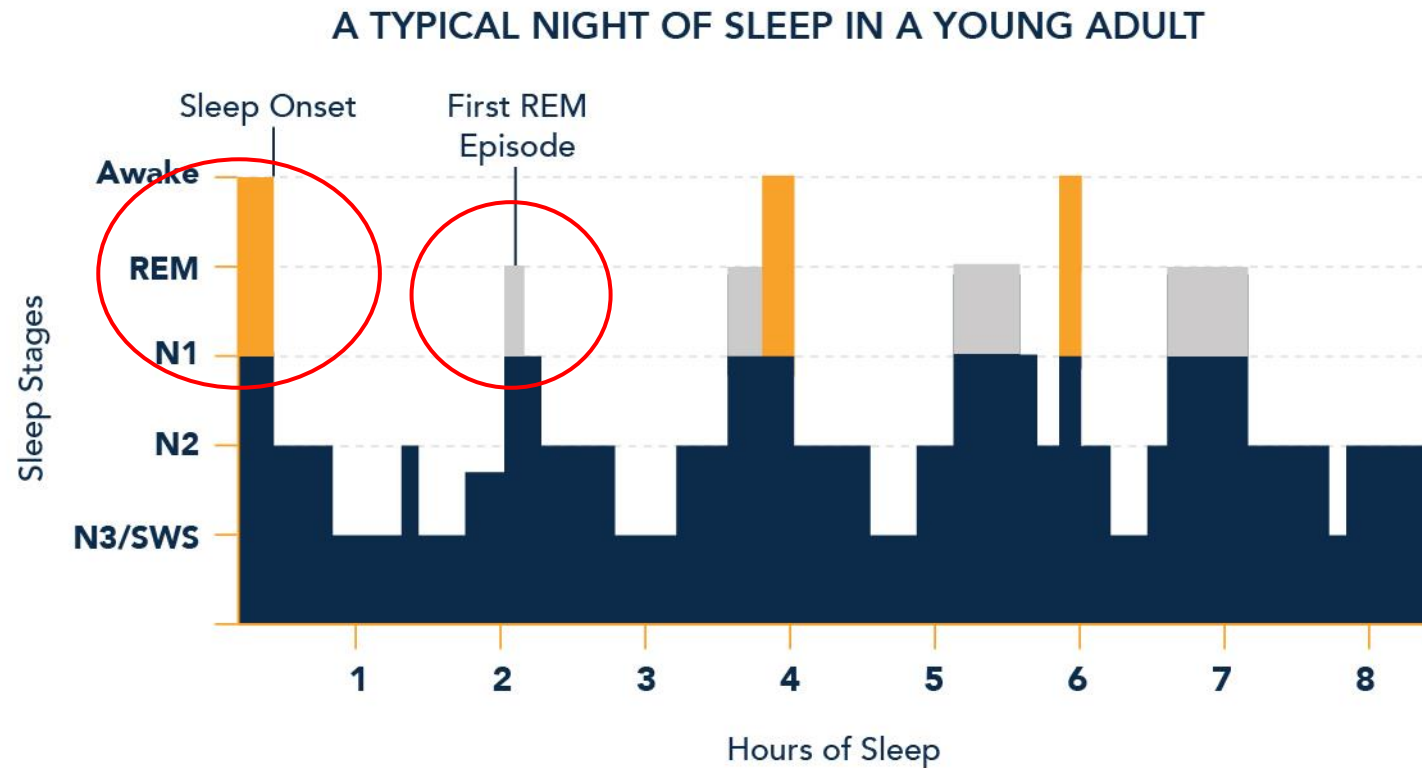
Insomnia

- ▶ DSM-5 Definition
 - ▶ Difficulty falling or staying asleep
 - ▶ >30 minutes
 - ▶ At least 3 night/week
 - ▶ At least 3 months
 - ▶ Sleep-related daytime dysfunction
- ▶ Comorbidities

Prevalence of Insomnia

- ▶ Prevalence in Civilian populations is 9-15% (Ohayon, 2002; Licstein et al., 2003)
- ▶ Prevalence insomnia in the military ranges from 8%-63% (Taylor, Pruiksma, Hale, Kelly, Maurer, Peterson, et al., in press)
- ▶ Varies so much due to assessment and location variability
- ▶ Our research shows approximately 20%

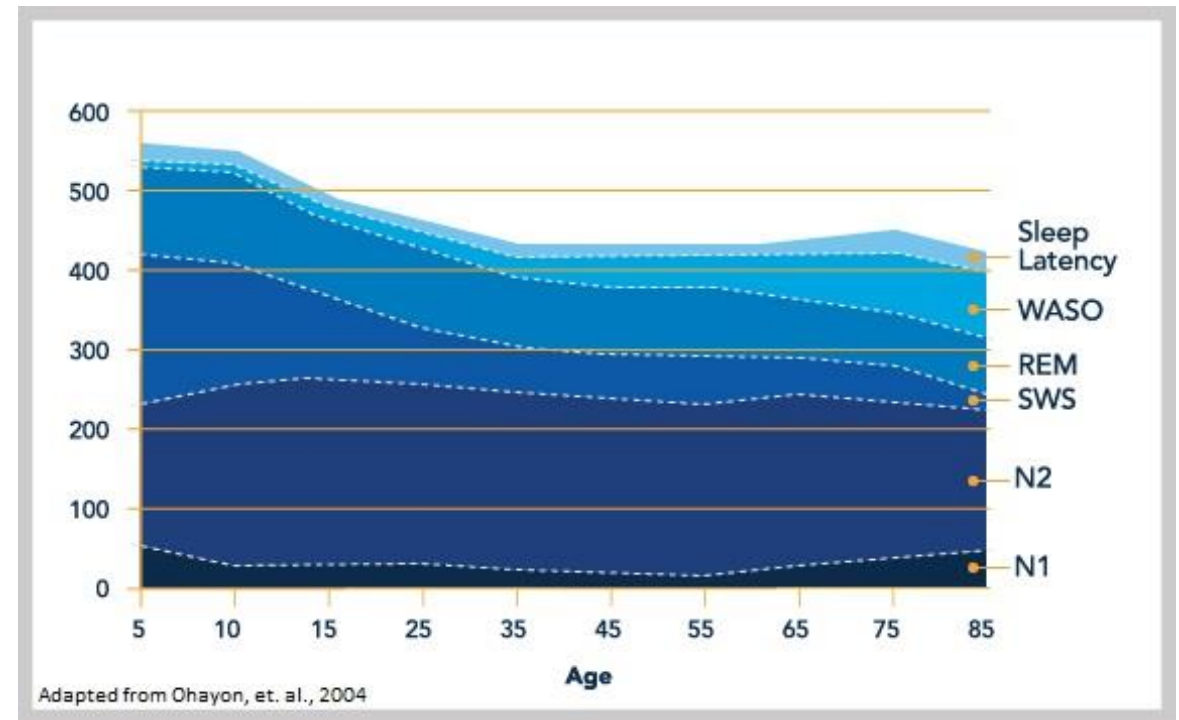
Across the Night



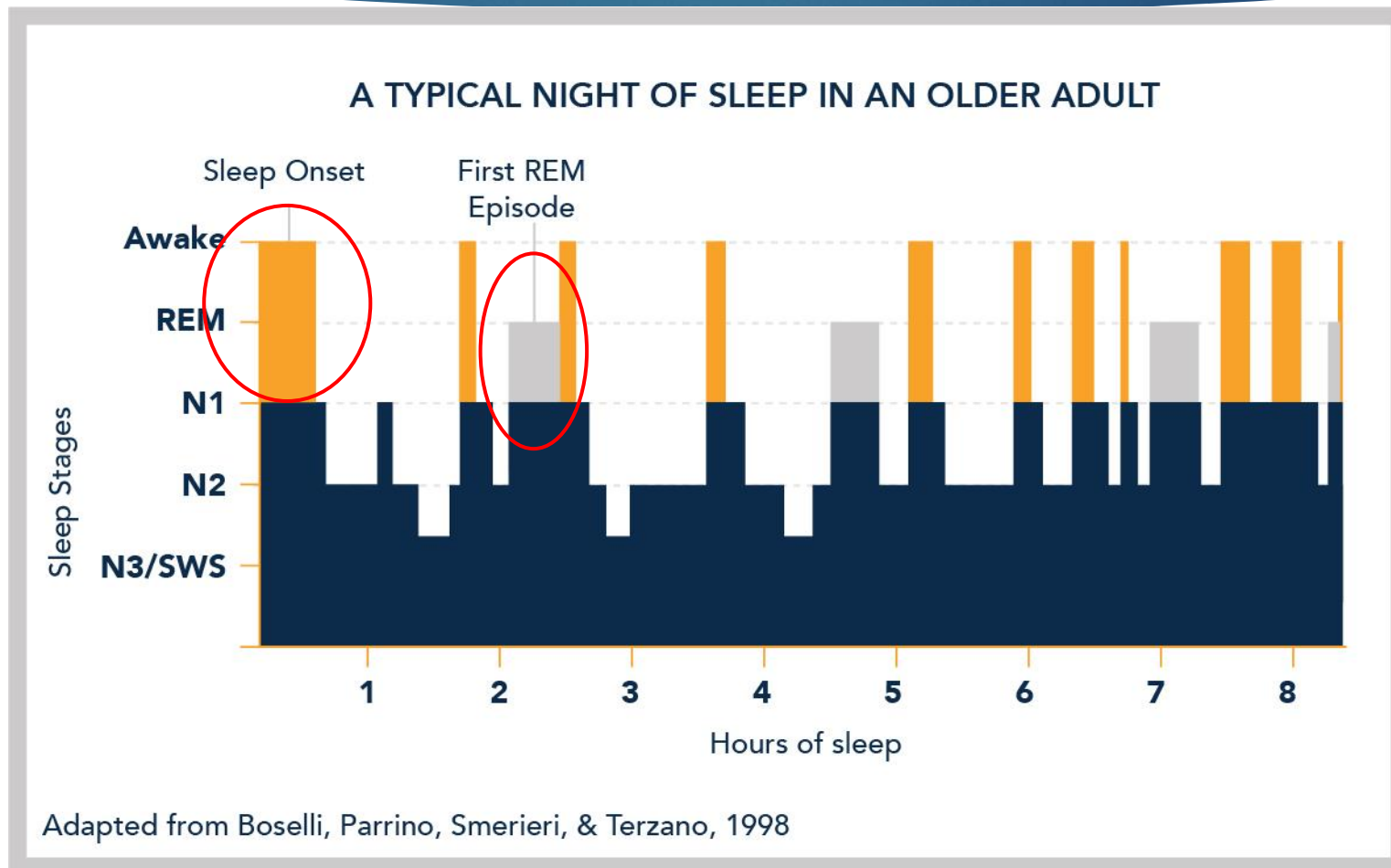
Adapted from Boselli, Parrino, Smerieri, & Terzano, 1998

Aging

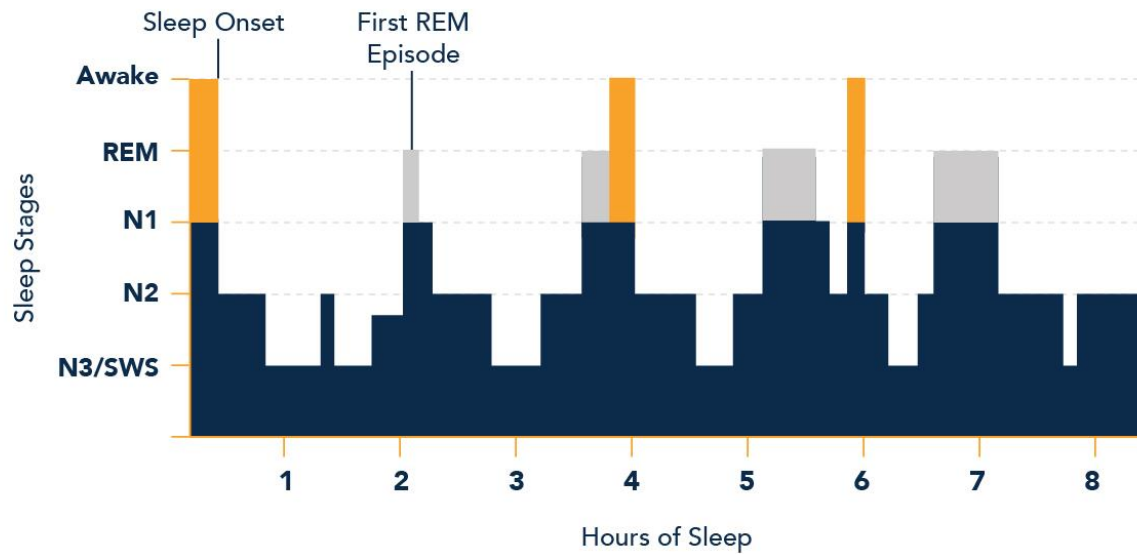
- ▶ Sleep need changes as we age
 - ▶ Average sleep duration tends to decrease from adolescence until 40
 - ▶ Plateaus until after 75
- ▶ Sleep mix also changes
 - ▶ Decreases in N3 (SWS)
 - ▶ Increases in wakefulness
 - ▶ Longer SOL
 - ▶ Greater WASO



Across the Night

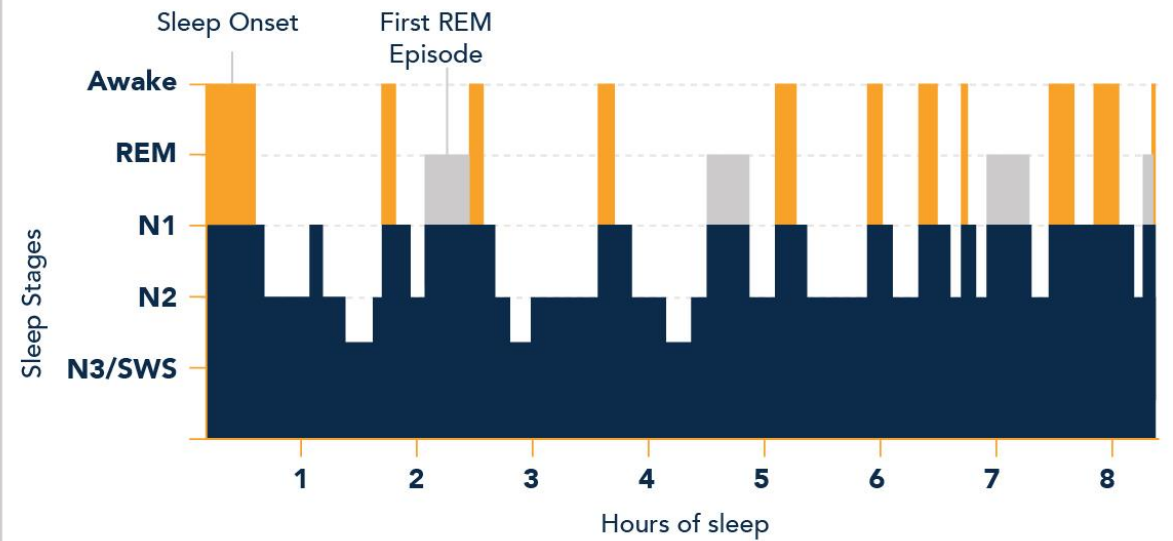


A TYPICAL NIGHT OF SLEEP IN A YOUNG ADULT



Adapted from Boselli, Parrino, Smerieri, & Terzano, 1998

A TYPICAL NIGHT OF SLEEP IN AN OLDER ADULT

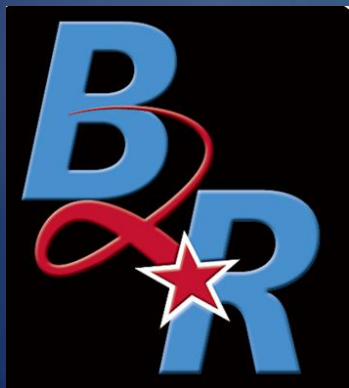


Adapted from Boselli, Parrino, Smerieri, & Terzano, 1998

Stimulus Control

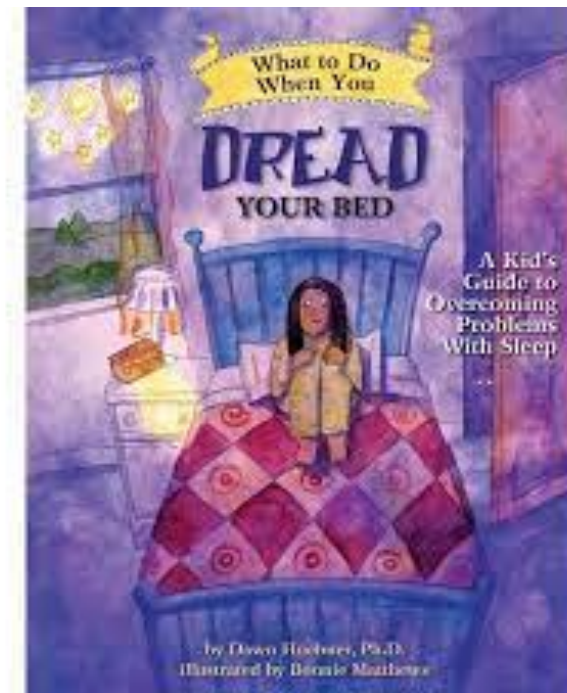
- ▶ Bed only for sleep and sex
- ▶ No bed until sleepy
 - ▶ Tired vs. sleepy
- ▶ 15 minute rule
- ▶ No napping





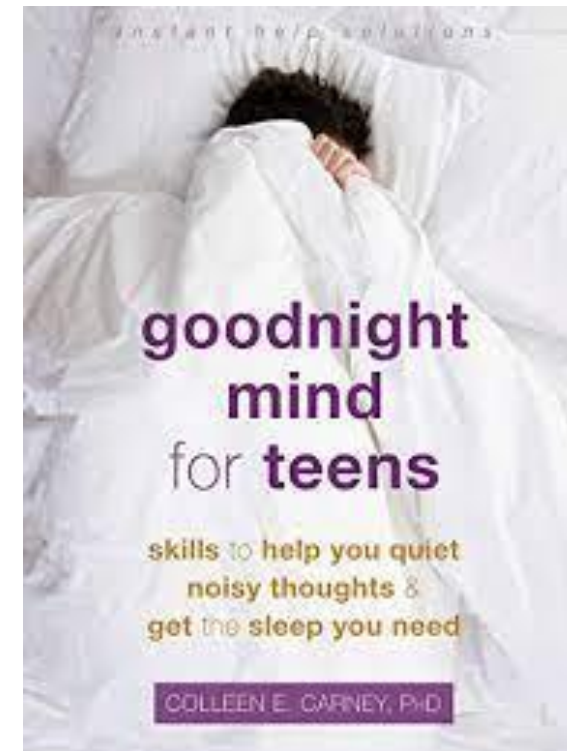
Pediatric Insomnia

- ▶ Behavioral Insomnia of Childhood
 - ▶ Sleep onset type
 - ▶ Excuse-me drill
 - ▶ Limit setting type
 - ▶ Excuse-me drill, Bedtime pass
 - ▶ Combined-type
- ▶ Other Considerations
 - ▶ Nightmares
 - ▶ Parasomnias
 - ▶ Sleep Apnea

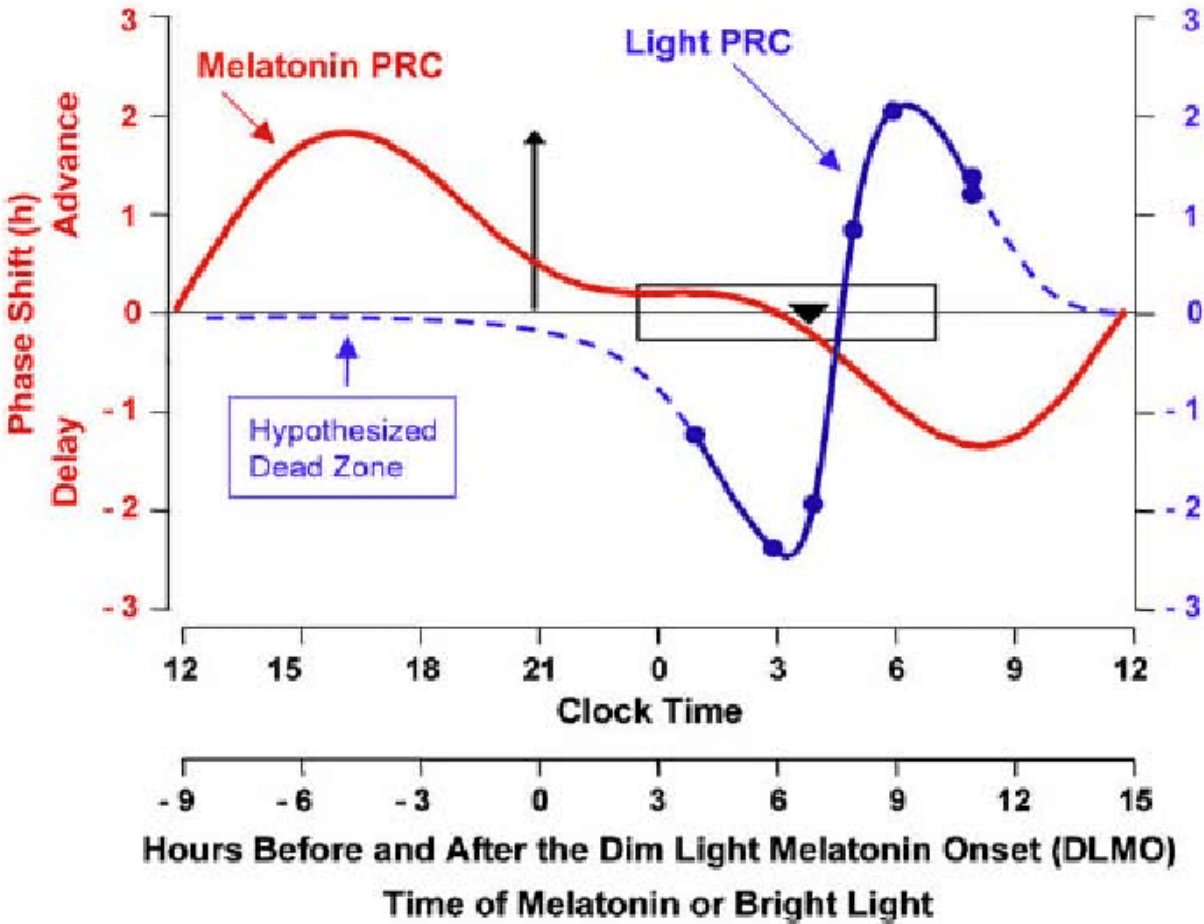


Adolescent Insomnia

- ▶ Can benefit from CBTI
- ▶ Other considerations
 - ▶ Circadian delay
 - ▶ Nightmares
 - ▶ Sleep apnea



Human Phase Response Curves To Bright Light and Melatonin



A few notes on medications

- ▶ Most common for insomnia
 - ▶ Z drugs (e.g., Ambien, Sonata, etc.)
 - ▶ Benzodiazepines
 - ▶ Newer – Orexin Receptor Antagonists (e.g., Belsomra)
- ▶ For nightmares
 - ▶ Prazosin
- ▶ Other things you may run into
 - ▶ SSRIs/SNRIs – Suppresses REM, increases fragmentation
 - ▶ DNRI (Wellbutrin) – Difficulty falling asleep (particularly in women)
 - ▶ Varenicline (Chantix) – Atypical dreams