

Sleep for Good Metabolic Health



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DISCLAIMER



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Learning Objectives

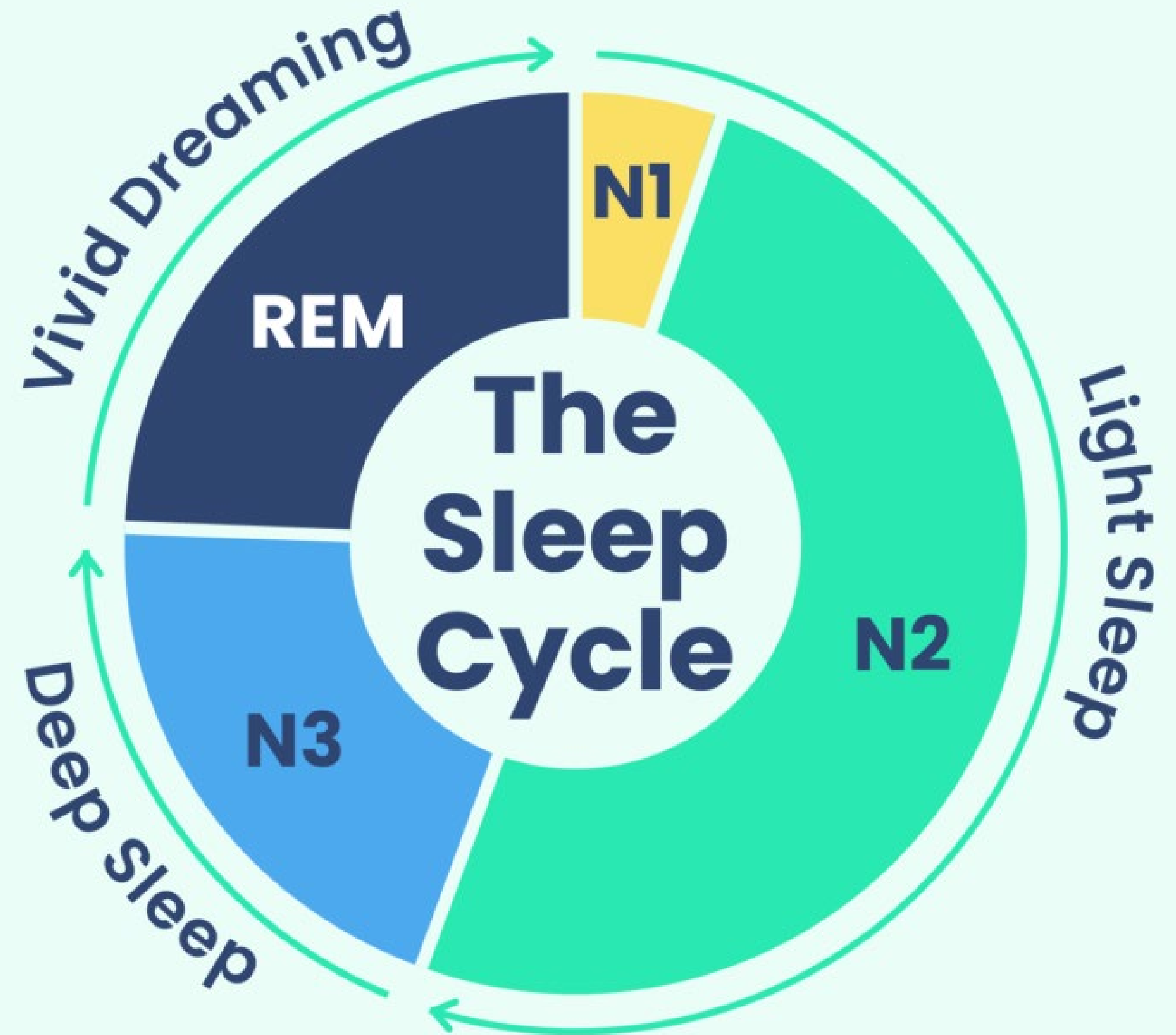
- Describe the effects of sleep duration and nutrition on cognitive function, weight management, and chronic disease risk
- Identify evidence-based sleep hygiene, nutrition and lifestyle interventions that improve sleep quality and overall health
- Apply evidence-based counseling strategies to help patients improve sleep behaviors and reduce risk factors associated with inadequate sleep

What happens when you sleep?



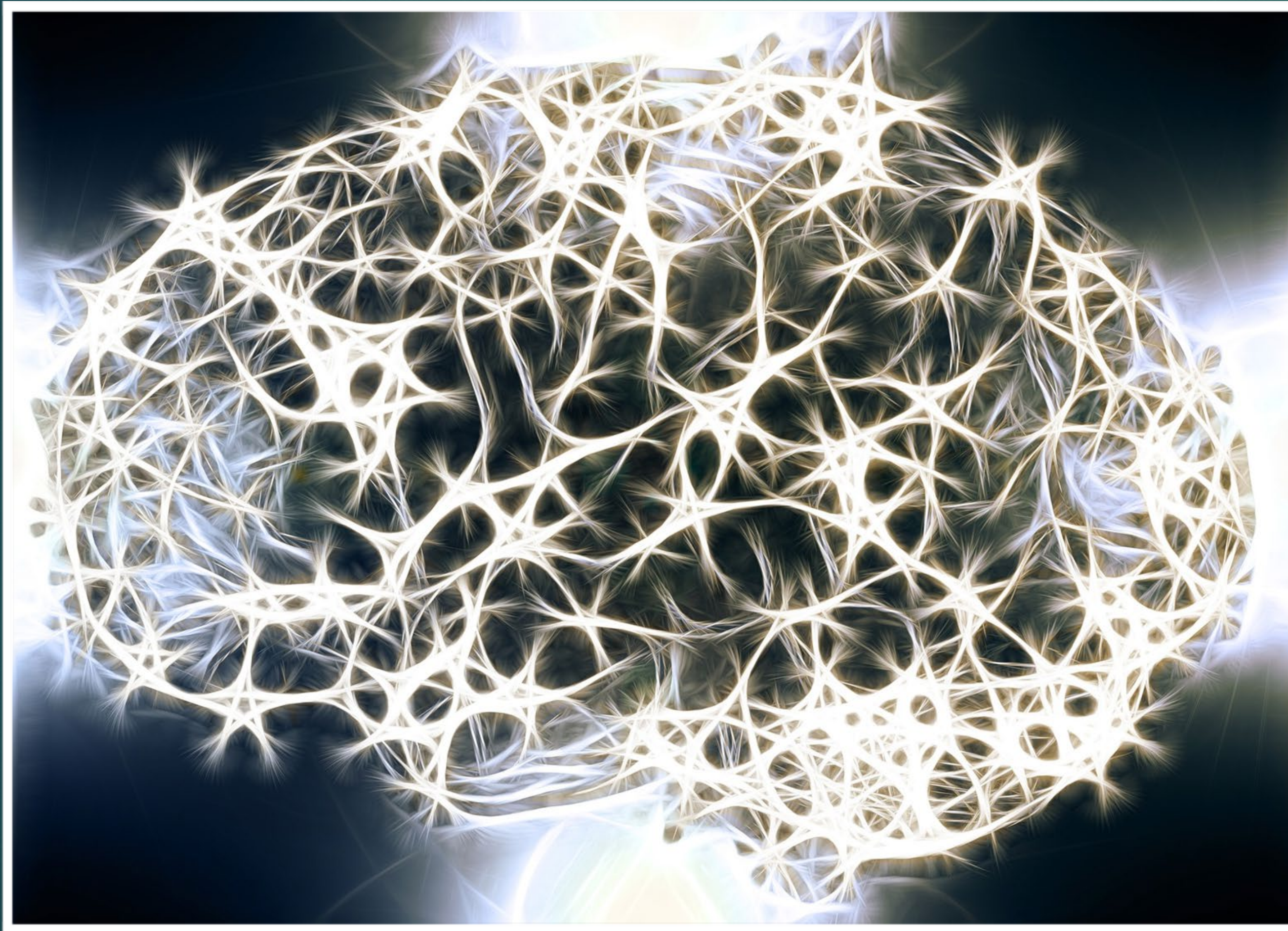
<https://youtu.be/0LNdsTrQJCs?si=7BQmguMHORwIRY aH>

Stages of Sleep



Suni, July 21, 2026

Sleep and Cognitive Function



- Beta-amyloid waste **BUILDS UP** in the spaces between brain cells while awake
- Beta-amyloid build-up **FORMS PLAQUE** between brain cells hindering communication between neurons

Sleep and Cognitive Function



- Beta-amyloid toxins get **CLEANED** out during sleep **BEFORE** plaque forms

A. Strengthens Brain Function

Sleep-deprived individuals find it **MORE** difficult to concentrate, assess situations, and make decisions



Sleep and Cognitive Function

B. Improves Memory

Without sleep, we cannot
FOCUS OUR ATTENTION
enough to learn or unify new
information well enough to
REMEMBER it



C. Helps with Creativity



- Sleep needed to **CONSOLIDATE** memories & make them stronger
- Emotional components of memory are **STRENGTHENED** during sleep, helping creativity

Sleep and Weight Management

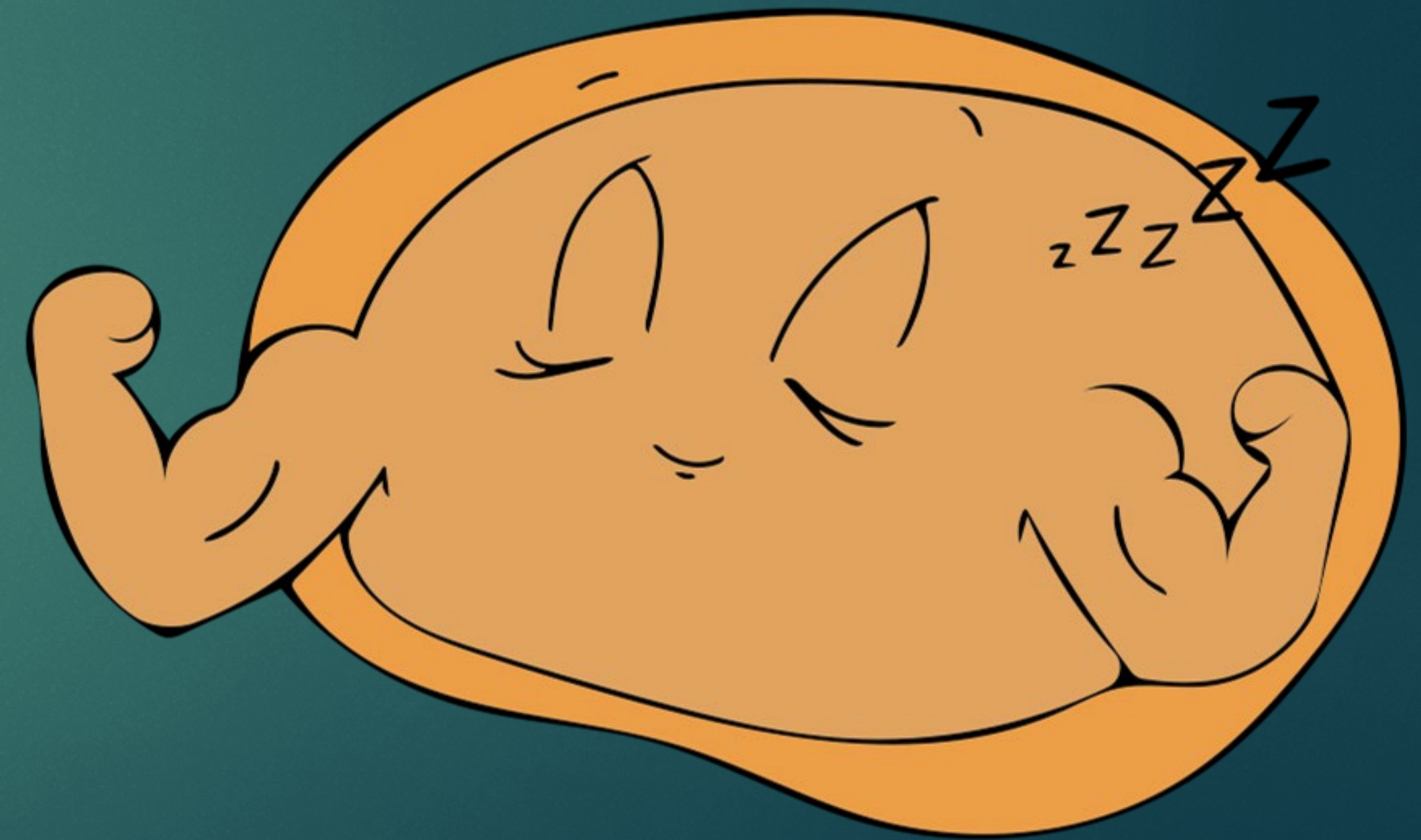


- Studies report strong correlation between length of sleep and amount of body fat
- Sleep **less than 7 hours** a night = higher body fat
- Participants **LOST 55% LESS** fat and **60% MORE** lean tissue when they slept **5.5** hours a night

Nedeltcheva et al., October 5, 2010

A. Improves Metabolism

Burn Fat & Build
Muscle While
Sleeping



Sleep and Weight Management

B. Better Regulation of Hormones



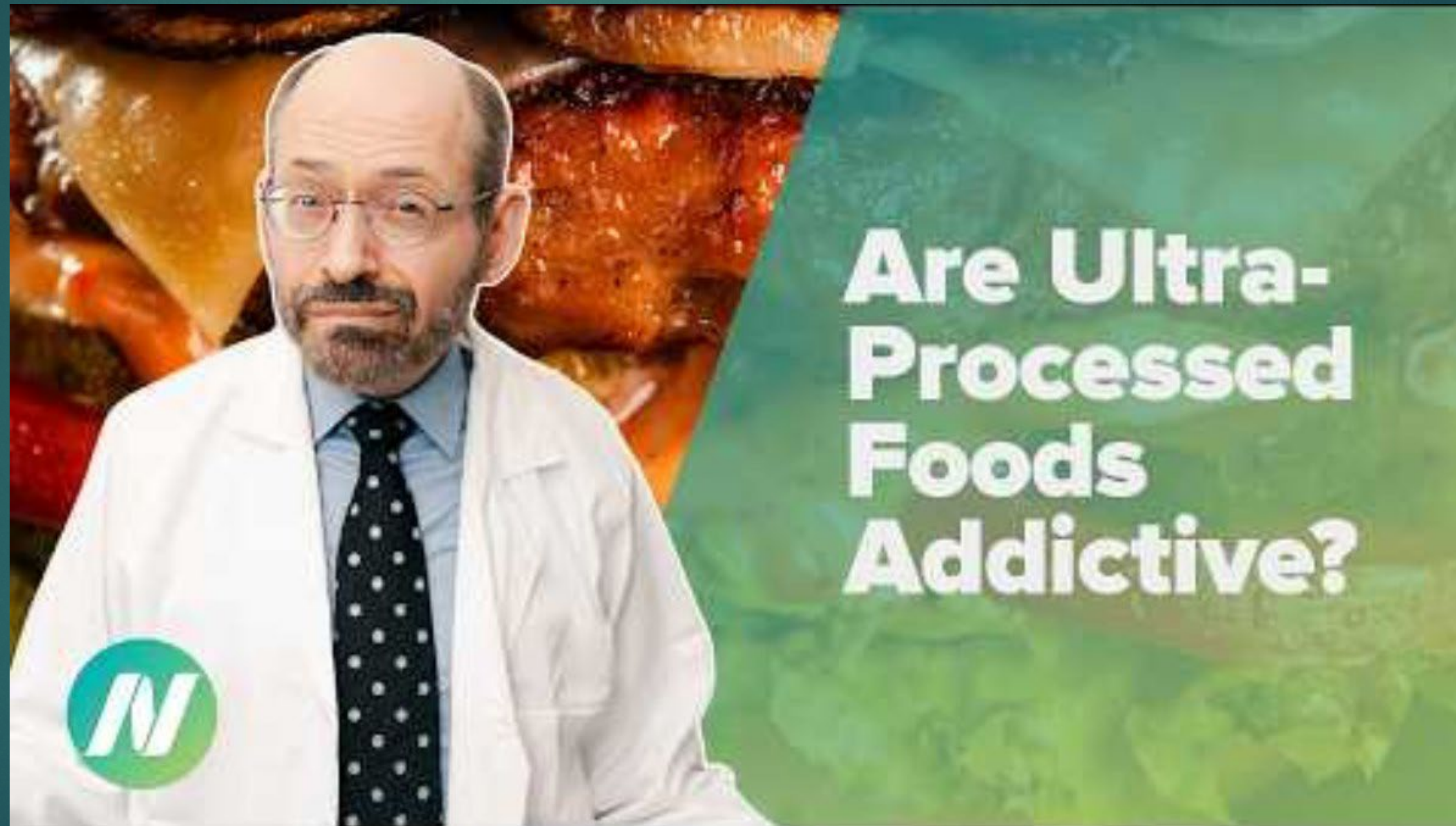
Sleep Affects
Hunger &
Fullness
Hormones

B. Better Regulation of Hormones

Hunger Scale



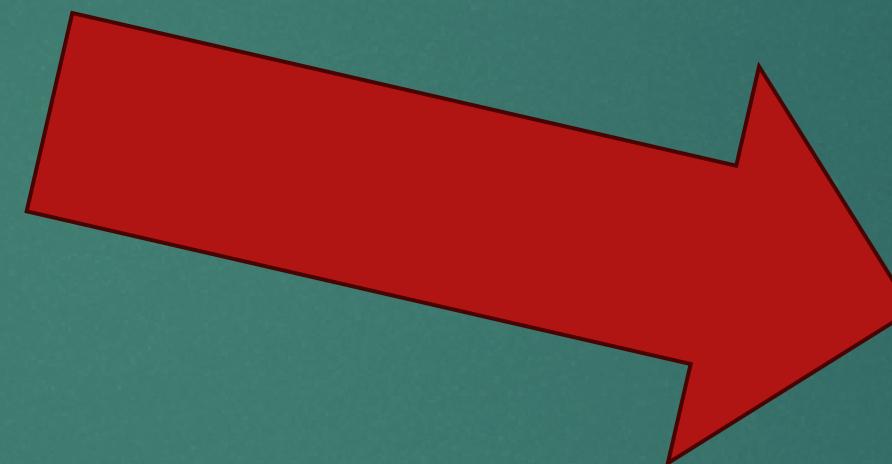
Why do I crave certain foods when I am sleepy?



<https://www.youtube.com/watch?v=eyBzCjOitUU>

C. Reduces Cravings

Processed whole foods vs. Ultraprocessed foods

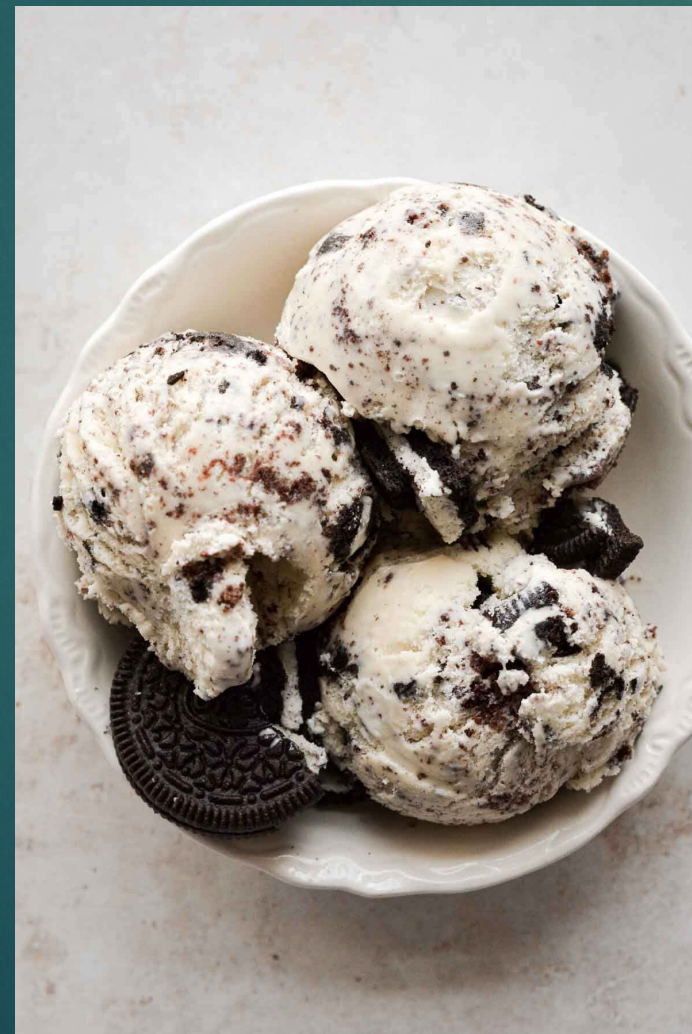


Coulson, November 10, 2025

Sleep and Weight Management

C. Reduces Cravings

UPFs activates “pleasure-seeking” part of the brain



Andreeva, et al., May 25, 2023

Sleep and Weight Management

Sleep and Chronic Disease Risk

Chronic inflammation,
insulin resistance,
heart disease, and
obesity **ALL IMPROVE**
with seven hours of sleep
on a regular basis



B. Improves Insulin Resistance

Lack of Sleep
INCREASES Insulin
Resistance

Zuraikat et al., 2024

D. Lowers Chances of Obesity

Lack of Sleep
PROMOTES
Weight Gain

Liu et al., 2026

E. Boosts Immune System

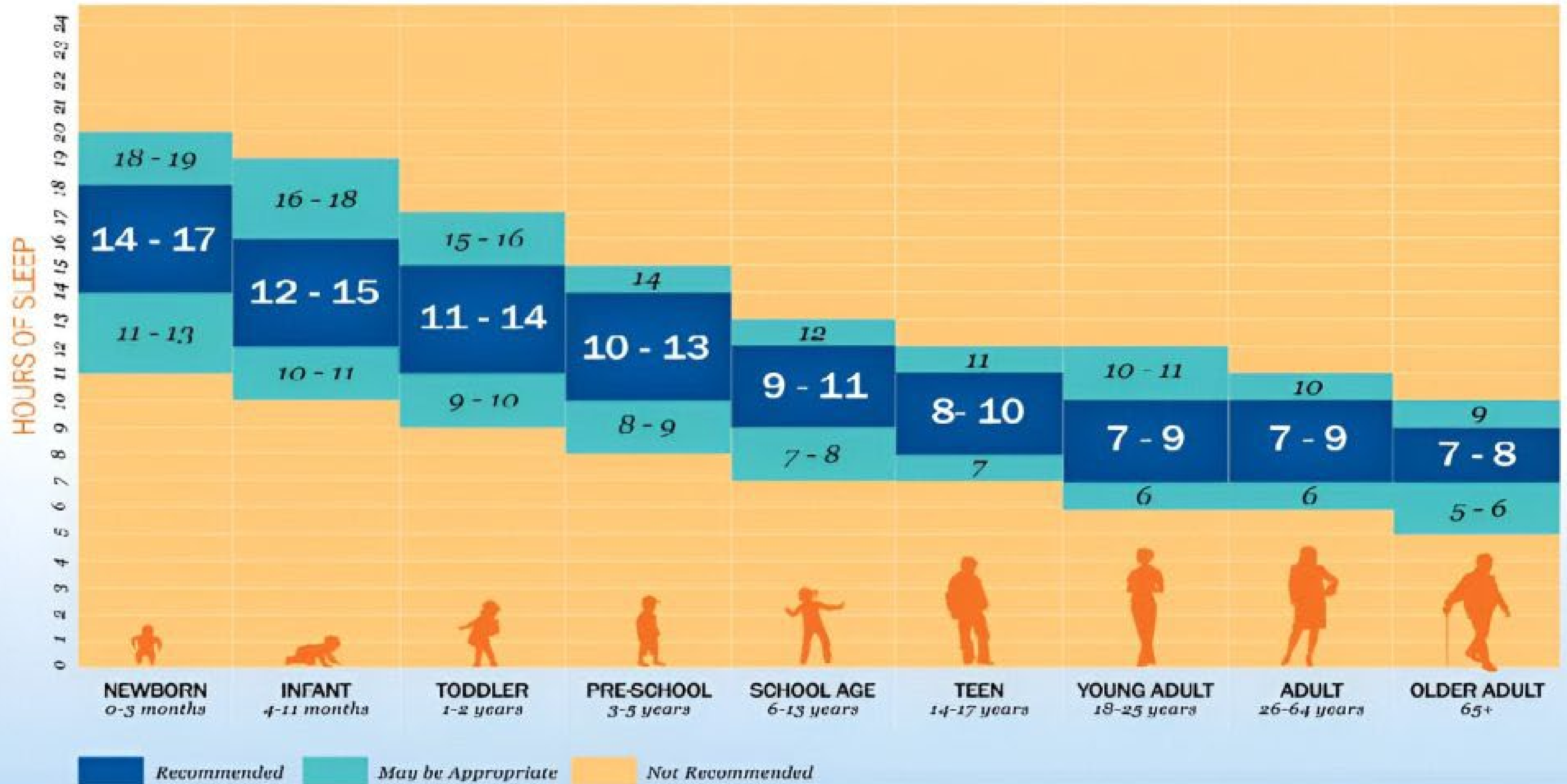
Lack of Sleep
LEADS to Sickness

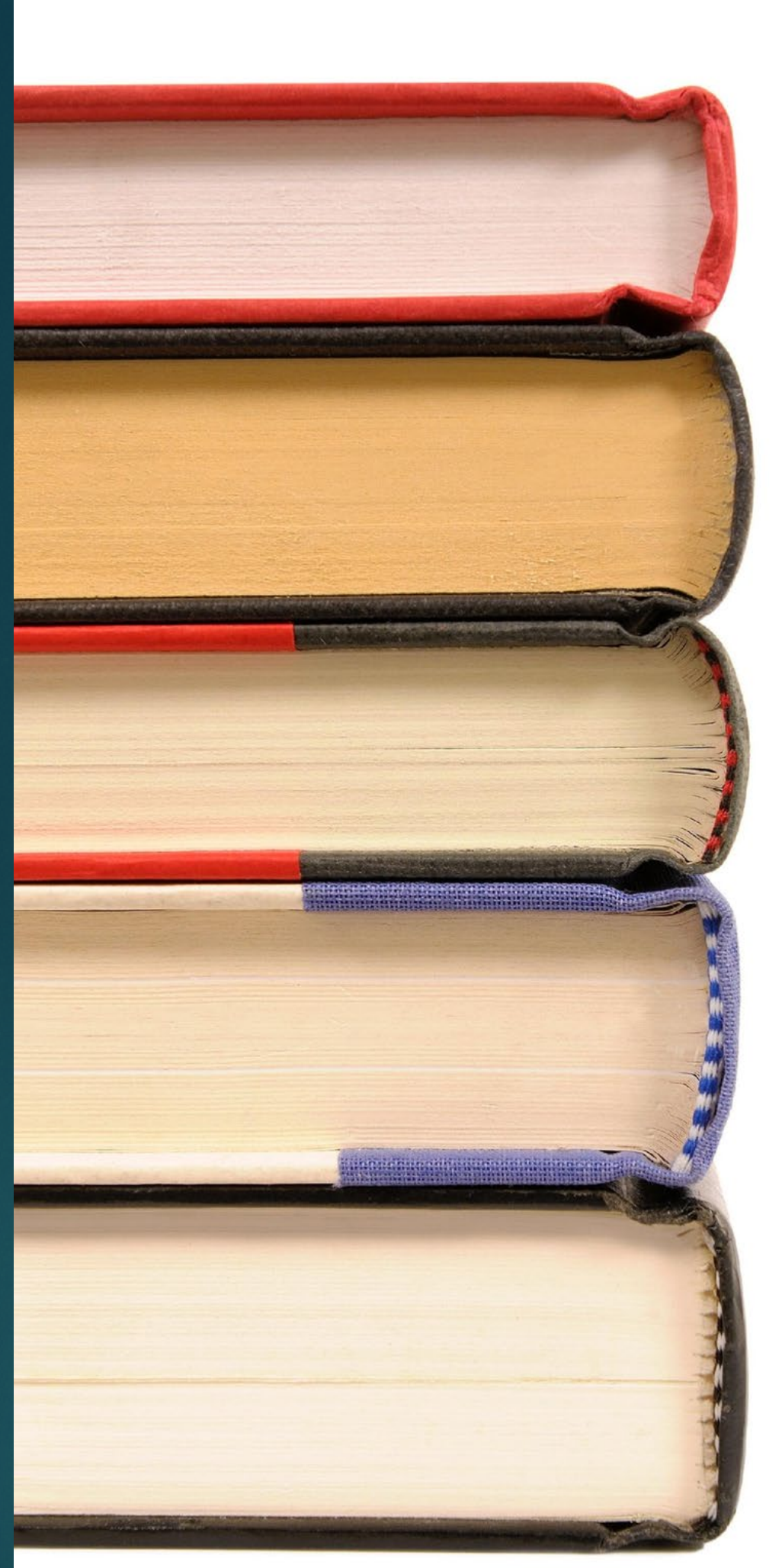


Evidence-based Interventions that Improve Sleep Quality and Health



SLEEP DURATION RECOMMENDATIONS





Bedtime Strategies



Evidence-based Interventions that Improve Sleep Quality and Health

Applying Evidence-based Counseling Strategies to Help Patients' Sleep Behaviors & to Decrease Risk Factors

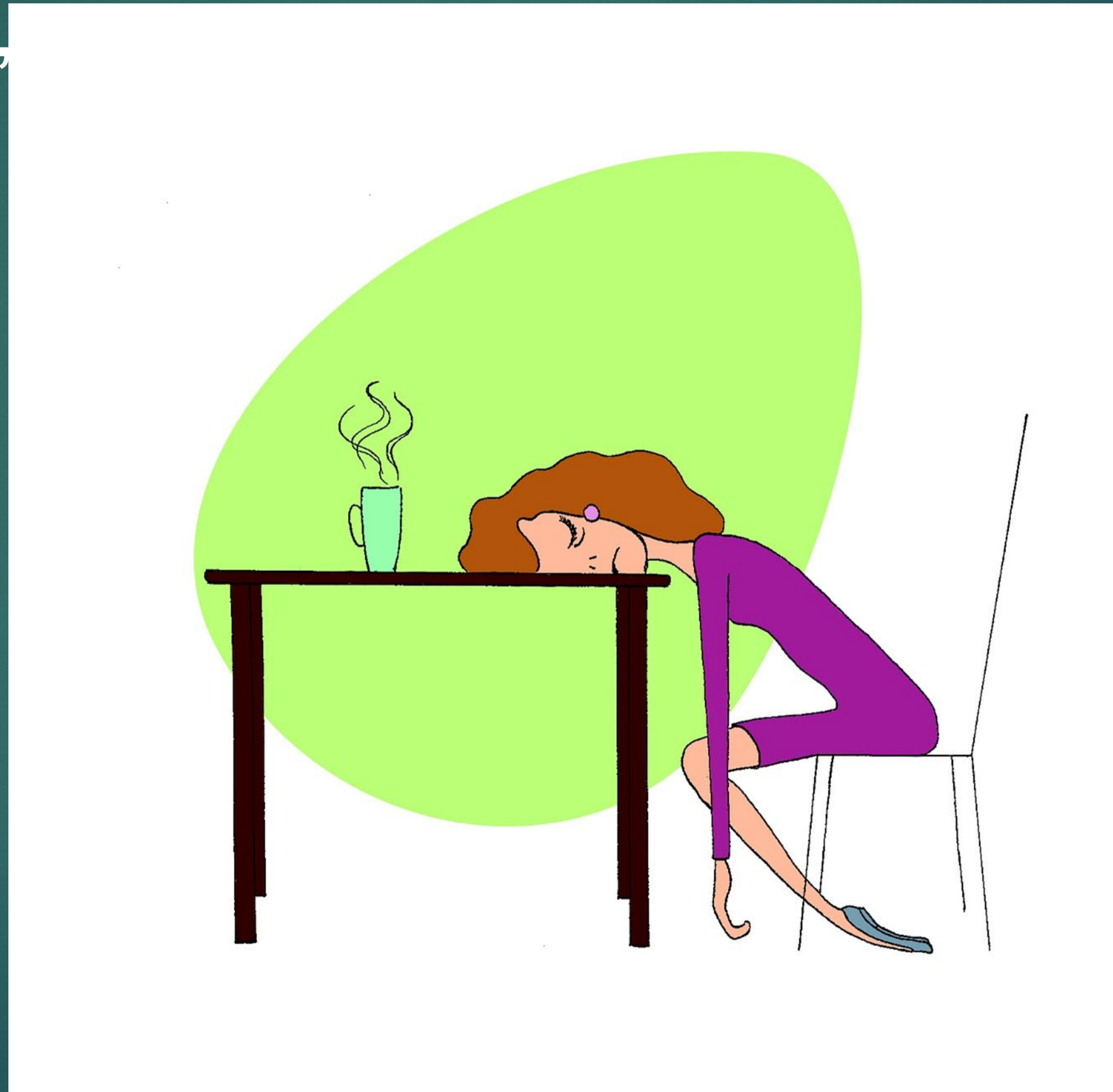
What specific changes will you help your patients make?



Apply Evidence-Based Counseling Strategies

A. Eat To Snooze

High fiber, low sugar,
high protein foods
POSITIVELY
affect sleep



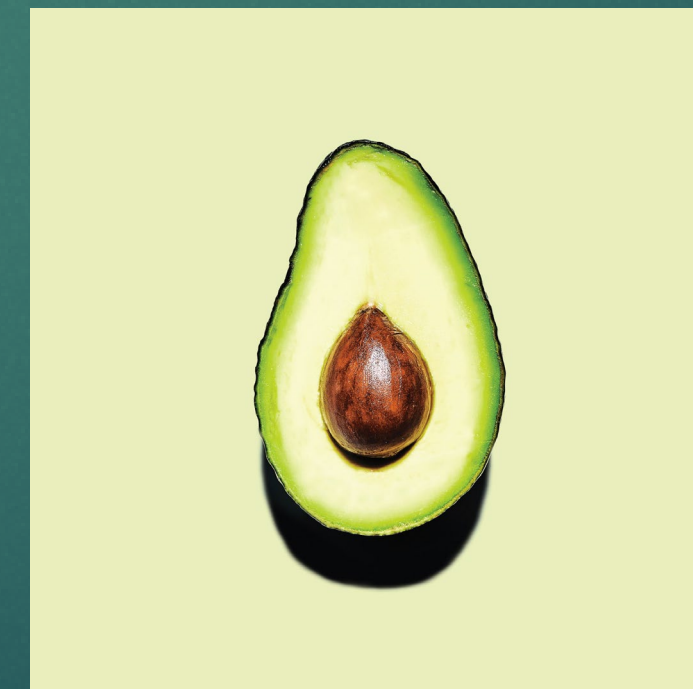
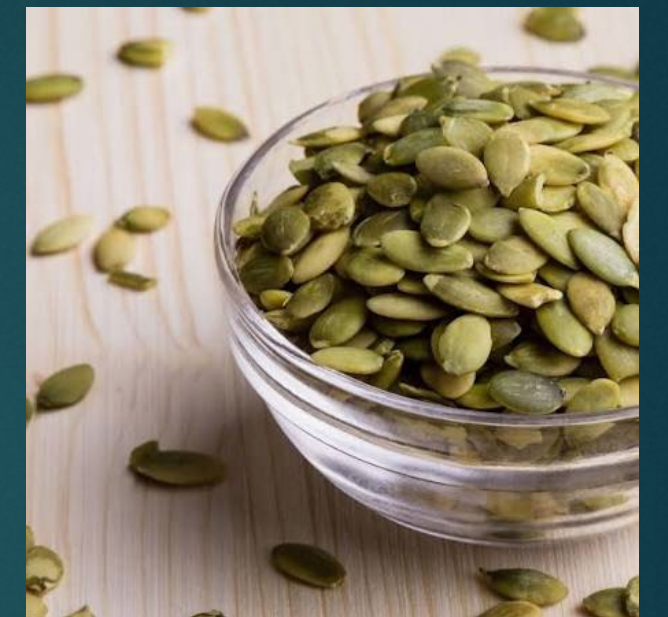
High fat, high sugar,
low fiber foods
NEGATIVELY
affect sleep

A. Eat To Snooze

Macronutrients
that promote sleep:



Micronutrients
that promote sleep:



Apply Evidence-Based Counseling Strategies

B. Caffeine, Alcohol, Nicotine



If caffeine sensitive,
caffeine **WILL** **negatively**
affect sleep



Alcohol and
nicotine
cause poor,
DISRUPTED
sleep



Apply Evidence-Based Counseling Strategies

C. Sleep & Exercise

MORE than any other
behavior, movement has been
consistently associated with
BETTER sleep



Souabni, et.al., April 28, 2026

Apply Evidence-Based Counseling Strategies

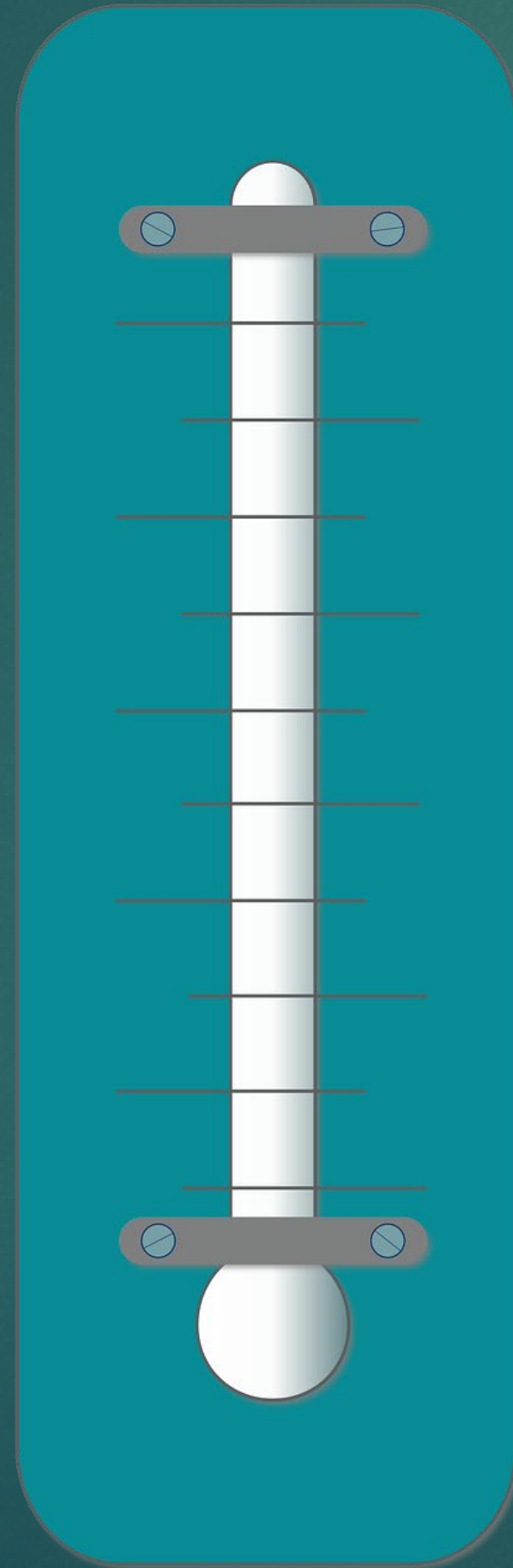
C. Avoid Blue-light

Don't let
SCREENS
come
BETWEEN
you and
your sleep!



Apply Evidence-Based Counseling Strategies

F. Room Temperature



- Cooler body temperatures are associated with **IMPROVED** sleep
- If possible, keep thermostat around **68 °F**

G. Turn Your Mind Off



- You program your brain to do other things in bed **BESIDES** sleep
- You've **TRAINED** your brain to be awake

Apply Evidence-Based Counseling Strategies

Brain's Bed Activities

- Sleep
- Sex
- Television
- Movies
- Radio
- Reading
- Eating
- Working
- Arguing
- Worrying
- Talking
- Doing bills
- Thinking
- Ruminating
- Planning
- Clock watching
- Rehearsing
- Replaying
- Texting

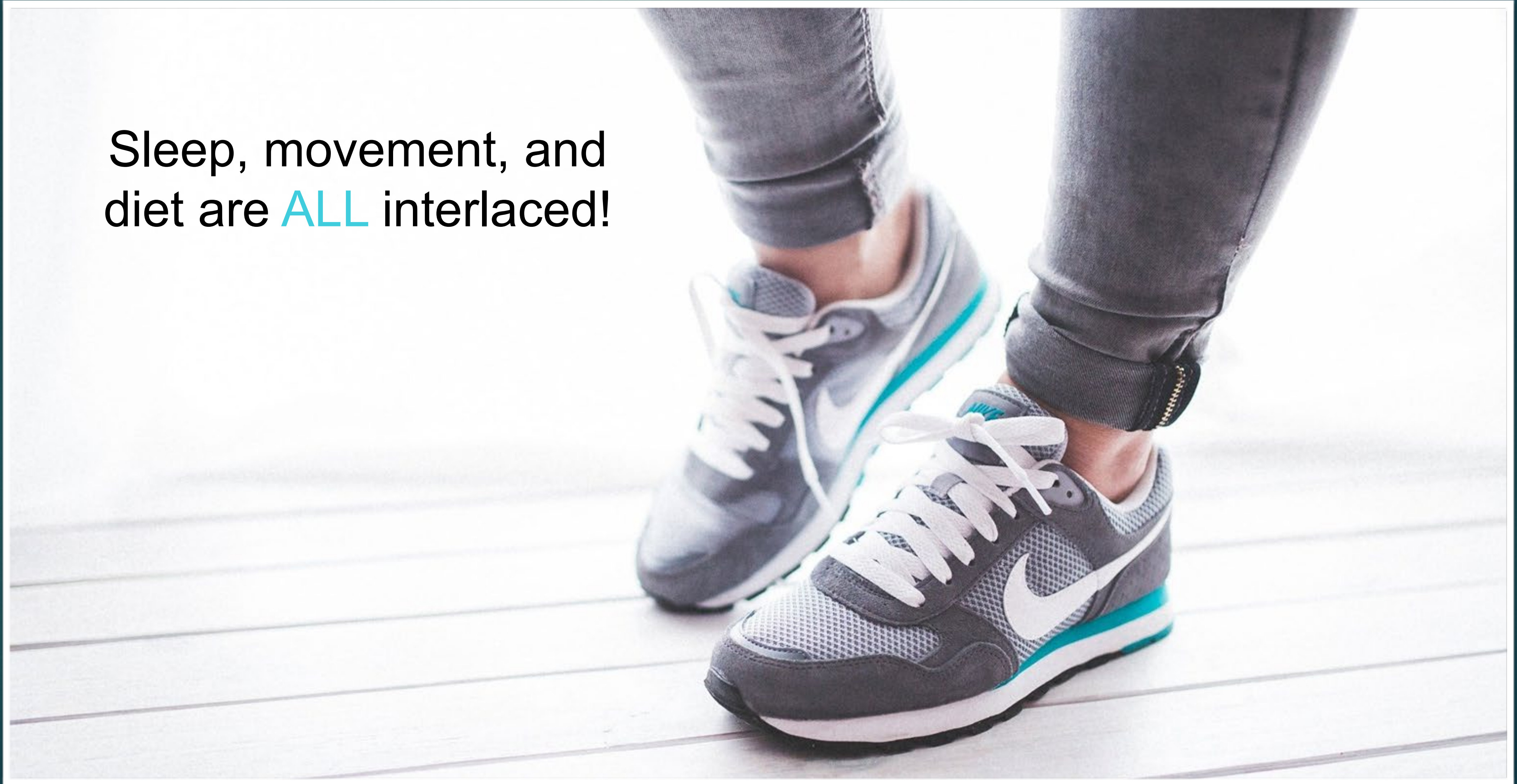
Worry Less at Night

- Allocate time during the day to make a “**WORRY LIST**”
- Put your **MIND** and body to rest at bedtime



Sleep Improves Healthy Choices

Sleep, movement, and diet are **ALL** interlaced!



References

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