

# **Sleep Hygiene:** **How veterinary care providers can get a good night's sleep**



**Marie Holowaychuk, DVM, DACVECC, CYT**

**Tennessee Veterinary Medical Association, September 2017**

# Introduction



- We spend one-third of our life sleeping
- Sleep has only been investigated since the 1950s
- Still learning about all of the benefits of sleep and how to improve sleep

# Benefits of Sleep

- Restorative function
- Refreshing the mind and body
- Processing what was learned during the day
  - Consolidating memories
  - Replaying tasks
- Removing waste products (amyloid- $\beta$ )
  - Linked with Alzheimer's disease



# Benefits of Sleep

- Childhood development
- Physical and mental health and wellness
- Athletic performance



## NRL Team takes part in AIS Sleep Study



# Sleep Time

- Most people require 7-9 hours per night
  - Tremendous inter-individual variability



- Daily sleep need not be consecutive

# Consequences of Sleep Loss

- Impaired brain activity/concentration
- Cognitive dysfunction
- Moodiness
- Depression
- Memory loss
- Hallucinations
- Low libido
- Heart disease
- Arrhythmias
- High blood pressure
- Weight gain
- Weakened immune response
- Accident prone
- Type II diabetes
- Accidental death

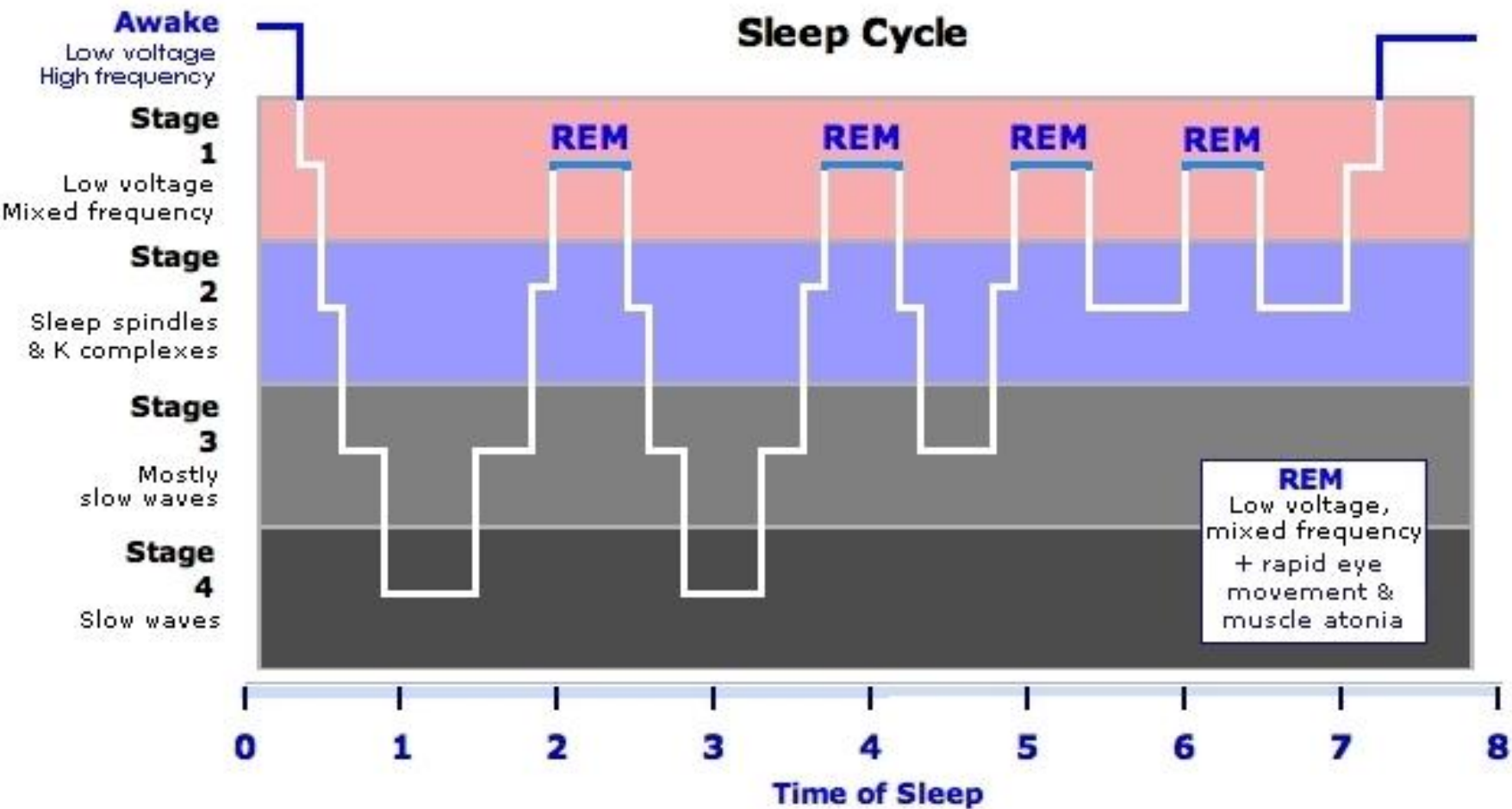


# Sleep Architecture

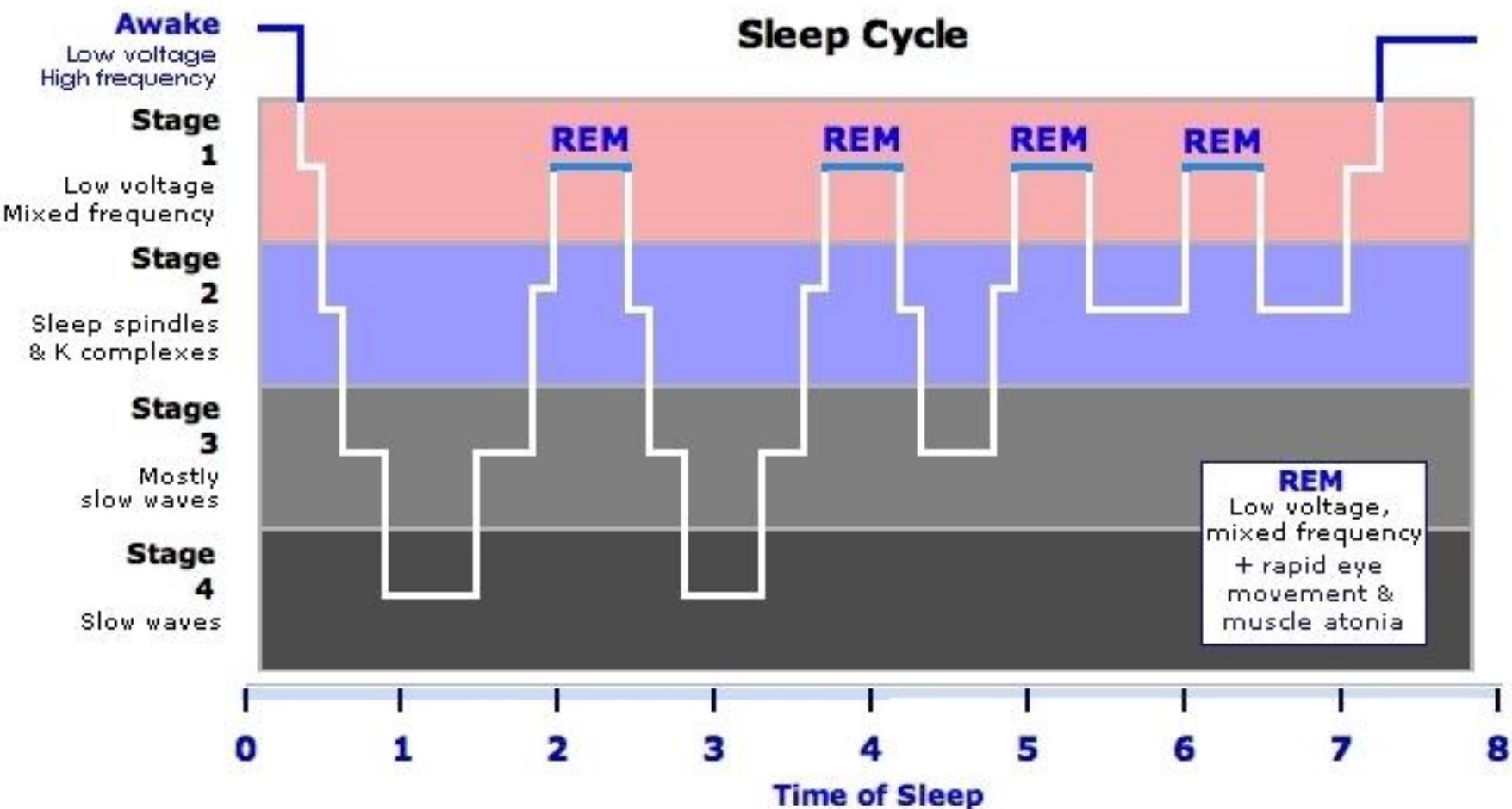
- Dynamic sequence of sleep stages
- Stage 1-4 and rapid eye movement (REM)
- Each complete sleep cycle takes 90-120 minutes



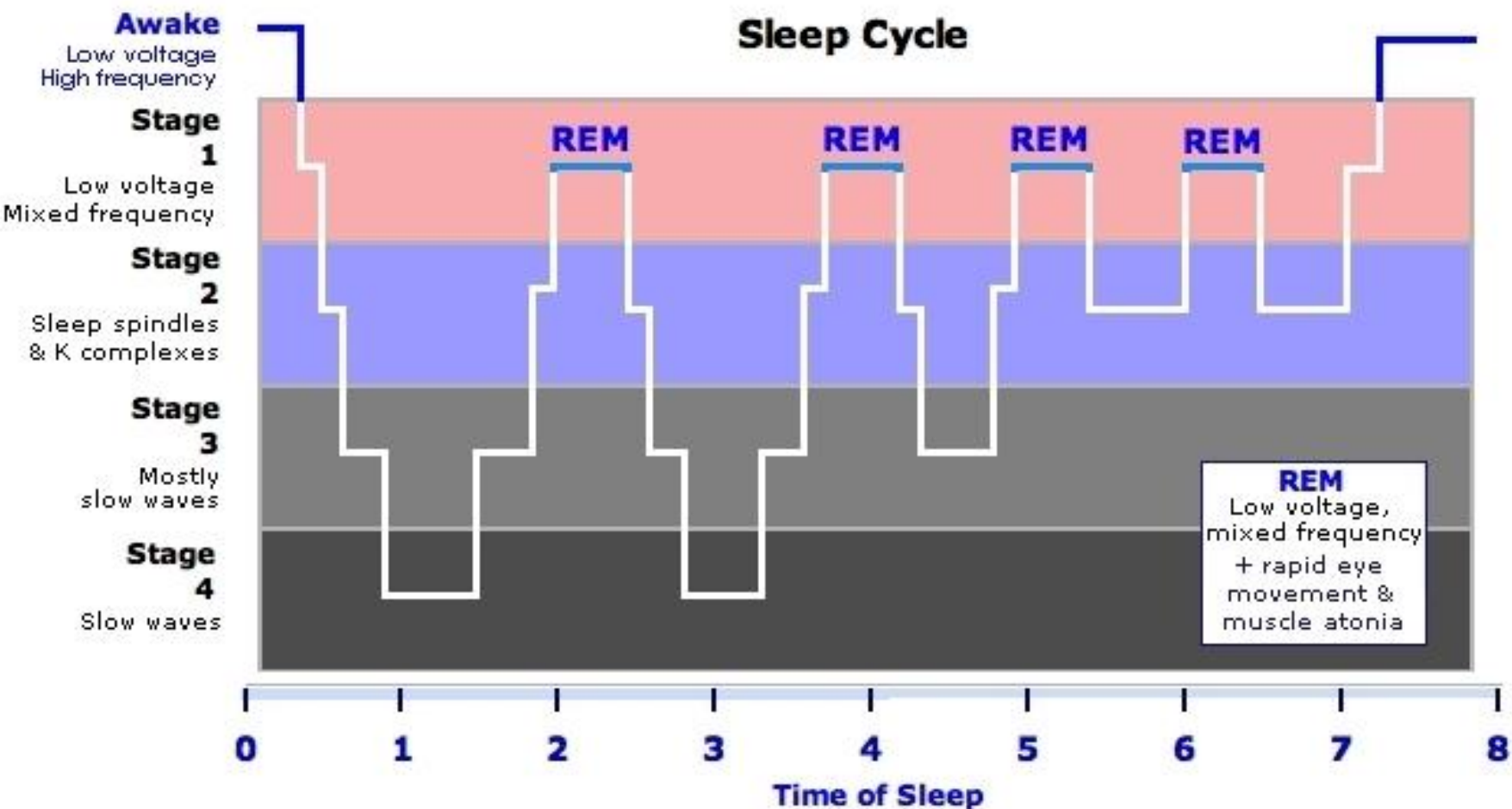




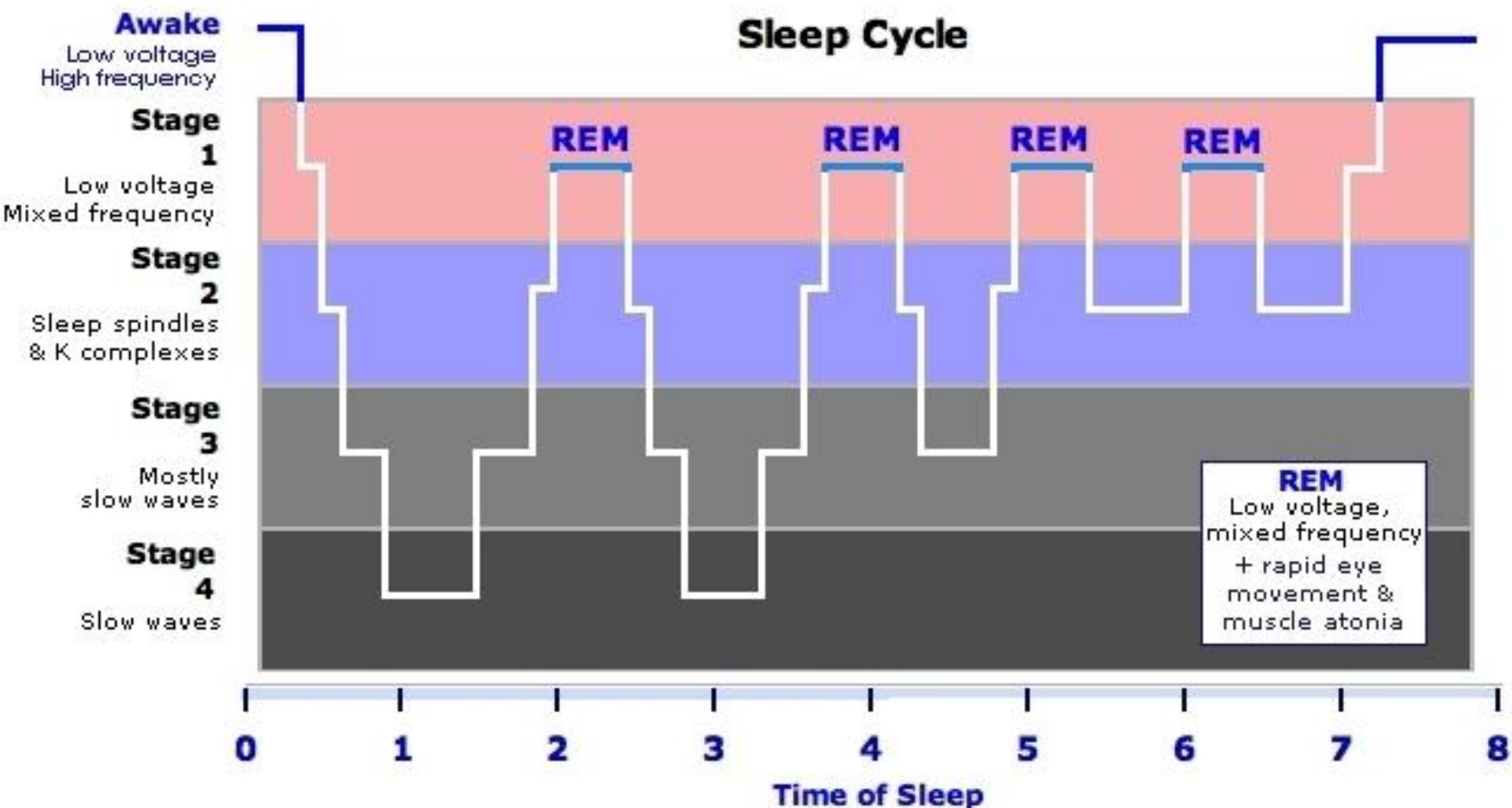
- Early in the night: long periods of deep sleep
- Later in the night: long periods of REM sleep



- **Stage 1:** light sleep, easily awakened, eyes move slowly, muscle activity slows down
- **Stage 2:** no eye movement, slower brain waves, occasional rapid brain waves



- **Stage 3:** very slow (delta) waves interspersed with smaller, faster waves
- **Stage 4:** almost all delta waves; now considered part of stage 3



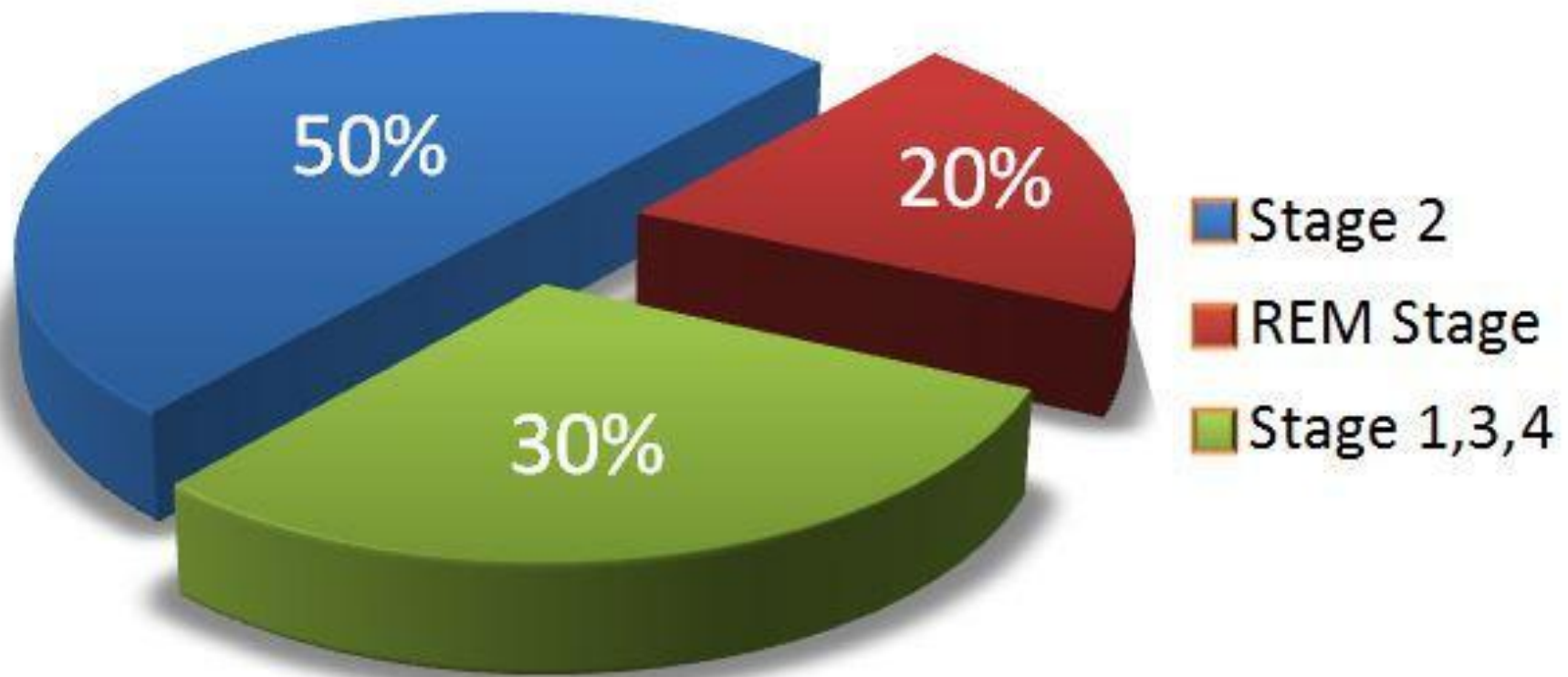
- **Stages 3 and 4:** *deep* or *delta* sleep
  - Difficult to wake someone
  - No eye movement or muscle activity
  - Night terrors (especially children)

# REM Sleep

- Eyes jerk and limb muscles are paralyzed
- Brain waves increase to awake levels
- Dreams most often occur
- Duration associated with learning, memory, homeostatic restoration, and mental health

The most important stage of Sleep...  
Why it matters





## Total Sleep Time In Different Sleep Stages

- Less time spent in REM sleep as people age





"My dad used to say 'You snooze, you lose.'  
I think that's when my insomnia started."

# Insomnia

- Affects 30-35% of adults in North America
  - 20-25% short-term (< 3 months)
  - 10% chronic (> 3 days/week for > 3 months)



# Insomnia

- Difficulty falling asleep (taking more than 30 minutes)
- Awakening during the night with difficulty falling back to sleep
- Waking early in the morning with difficulty falling back to sleep
- Usually caused by tension and worry



# Insomnia – Medical Conditions

- Hyperthyroidism
- Pain
- Depression
- Anxiety
- Allergies
- Sleep apnea
- GERD
- Indigestion
- Restless leg syndrome
- IBS
- Asthma
- Hypertension
- Heart disease
- Kidney disease
- Epilepsy
- Poorly regulated DM
- Teeth grinding
- Menopause

# What Else Affects Sleep?

- Noise
- Interruptions
- Room temperature
- Humidity
- Lighting
- Amount of early morning light
- Relaxation techniques
- Diet
- Naps during the day
- Exercise
- Exposure to outdoor light
- Self-talk
- Bedtime routine
- Stress reduction

# Physical Stress

- Full bladder
- Cold symptoms
- Change in altitude
- Poor mattress
- Smoking
- Vigorous evening workouts
- Disturbing noises (e.g., snoring)
- Disruptions in circadian rhythm:
  - Time zone change (i.e., jet lag)
  - Shift work
  - “lark” vs. “owl” living/working
  - Changes in natural light exposure



# Dietary Factors

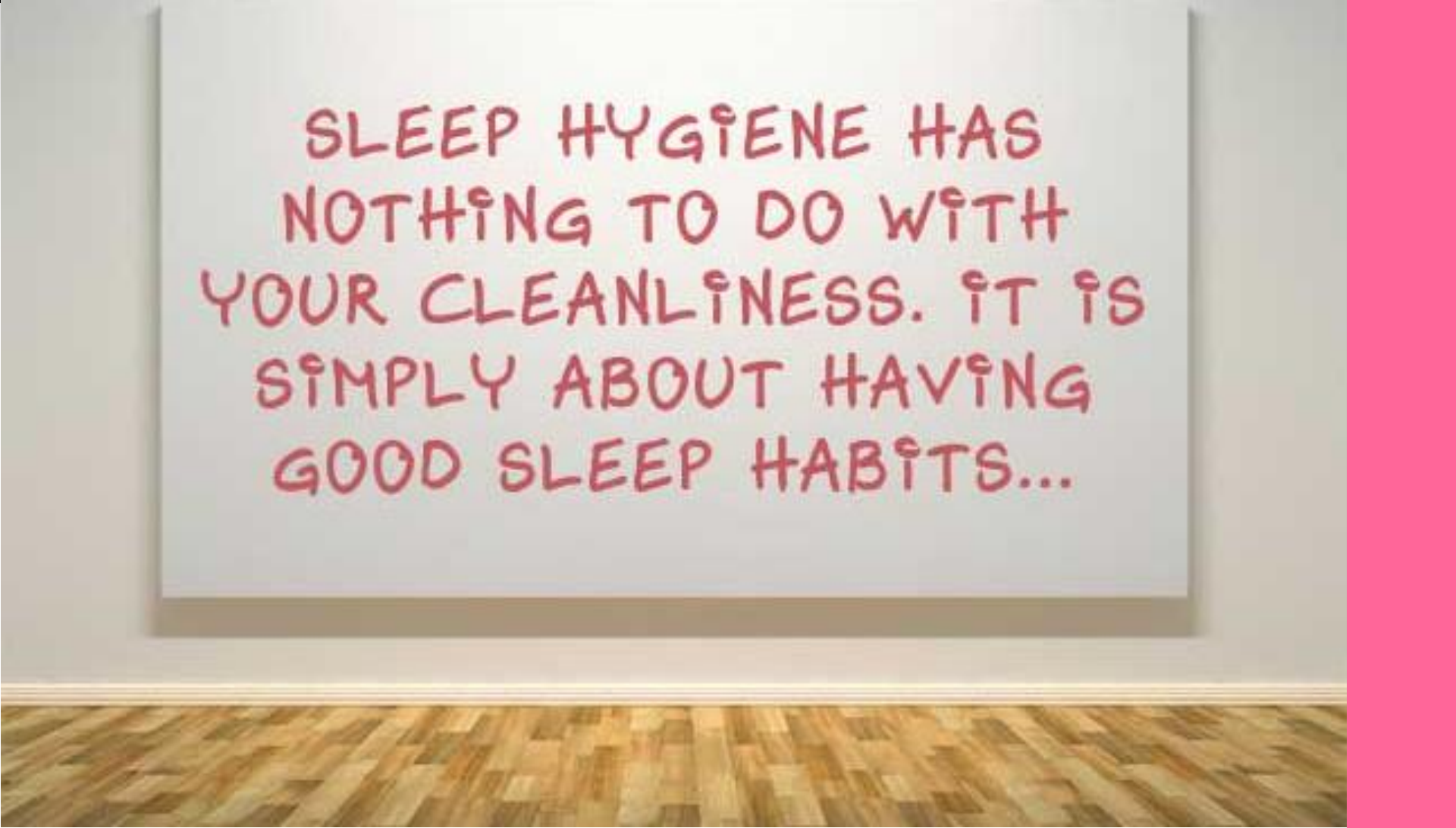
- Crash diets
- MSG
- Caffeine
- Alcohol
- Drugs:
  - Beta-blockers
  - Serotonergic medications
  - Appetite suppressants
- Deficiencies:
  - Calcium
  - Magnesium
  - Zinc
  - Copper
  - Iron
  - Vitamin B



# Emotional or Mental Stress

- Grief
- Recent trauma
- Conflict
- Arguments
- Anxiety
- Anger
- Depression
- Guilt
- Stressful life events (e.g., separation)
- Seasonal affective disorder (SAD)
- Nightmares
- Relocating or job changes
- Recent childbirth
- Excessive work demands
- Financial/relationship uncertainty
- Health concerns

[illegible]

A whiteboard with red text on a wooden floor. The text is written in a casual, hand-drawn style. The whiteboard is mounted on a light-colored wall, and the floor is made of light-colored wood planks. The text on the whiteboard reads: "SLEEP HYGIENE HAS NOTHING TO DO WITH YOUR CLEANLINESS. IT IS SIMPLY ABOUT HAVING GOOD SLEEP HABITS..."

SLEEP HYGIENE HAS  
NOTHING TO DO WITH  
YOUR CLEANLINESS. IT IS  
SIMPLY ABOUT HAVING  
GOOD SLEEP HABITS...

- What you can do to give yourself the best chance of falling and staying asleep for the amount of time needed to feel rested/restored

# Avoid Worry and Anxiety

- About falling asleep or staying asleep
- Not getting enough sleep
- Poor performance that might occur the next day



# Avoid Worry and Anxiety

- People with insomnia generally get more sleep than they think and can function despite being tired
- *Not sleeping does not lead to exhaustion, but worrying about sleeping does*





# Identify Negative Self-Talk

- Recognize maladaptive thoughts, expectations, or self-talk that interfere with sleep
- Replace with more helpful and positive sleep thoughts



# Sleep Cannot Be Forced

- Sleep occurs naturally when interference is removed
- *Trying* to fall asleep activates the mind and body
- Let go of all effort
- “It’s so nice to just lie here...”
- “I am drifting effortlessly...”



# Avoid Focusing on Being Awake

- This creates strong activating emotions
- “It’s interesting that I’m still awake...”
- “It’s normal to awaken from a lighter sleep”
- “I’ll take it in stride...”



# Eliminate Time Pressure

- It takes an average of 10-25 minutes to fall asleep
- The quantity of sleep is less important than the quality of sleep



# Sleep is Dynamic

- Moving 8-30 times per night is normal sleep behavior
- Sleeping “like a log” is unrealistic and should not be expected



# Decrease Negative Associations

- Rather than staying up later to avoid anxiety and negative connotations about not sleeping, use other techniques
  - Daily exercise
  - Routine bedtimes
  - Pre-bedtime routines
  - Relaxation techniques





# Set the Stage

- Spend 30 minutes preparing for sleep rather than just waiting to “feel tired”
- Keeping busy all evening will not facilitate falling asleep instantly
- Unwind and relax...
  - Meditation
  - Journaling
  - Reading
  - Tidying up clutter
  - Gentle yoga, stretching, Tai Chi



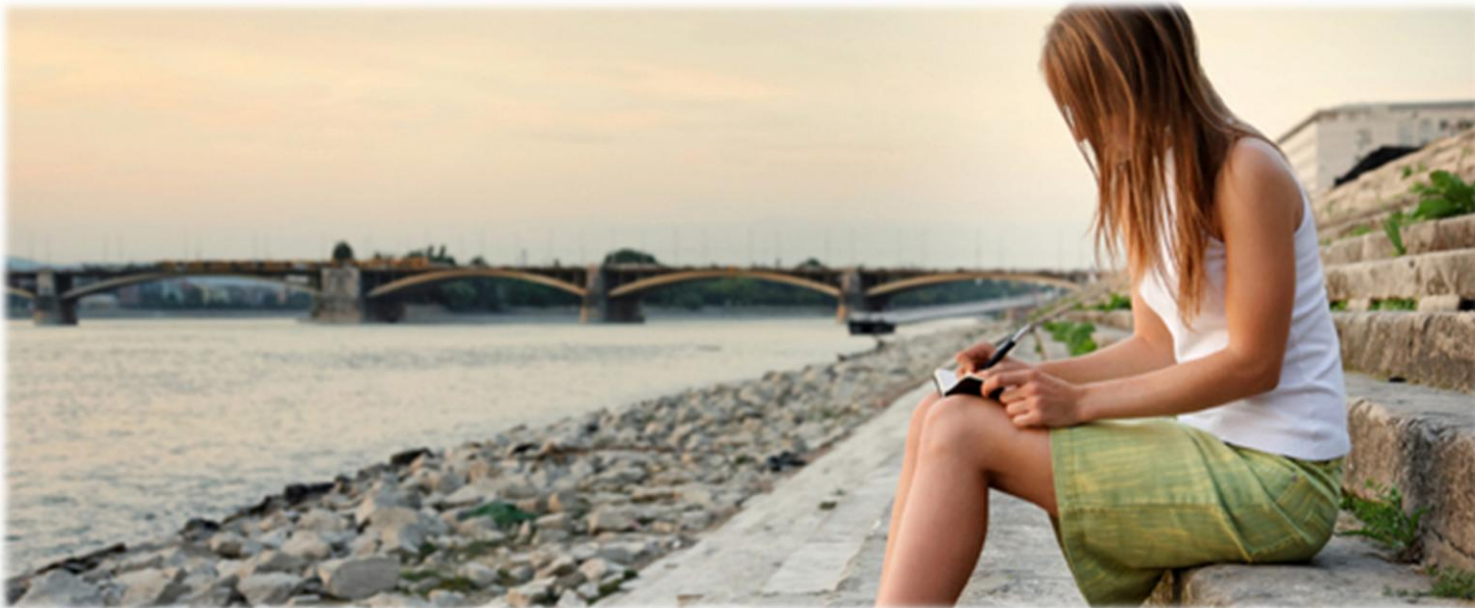
# Clear the Mind

- Thoughts of the:
  - Past
  - Future
  - Sleep itself
  - “Chatter”

**DEAR MIND,  
PLEASE STOP  
THINKING SO MUCH  
AT NIGHT, I NEED  
TO SLEEP.**  
KUSHANDWISDOM

# Thoughts of...

- The past...
  - Use journaling or seek out help to determine how you can resolve the issue or better cope



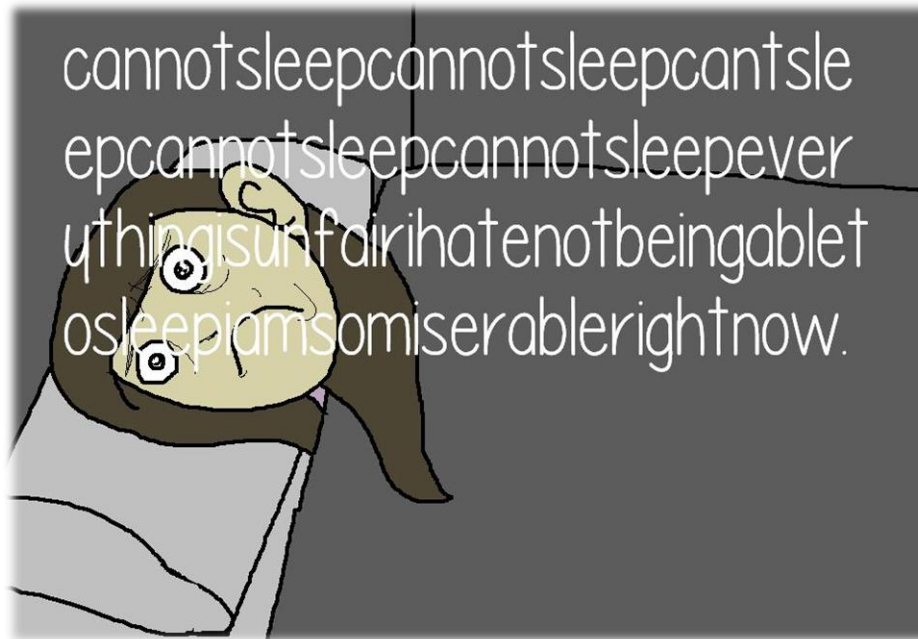
# Thoughts of...

- The future...
  - Set aside 10-20 minutes of daily “worry time” (ideally > 3-4 hours before bed)
  - Write down thoughts, action plans, to-do lists
  - Then let the thoughts go
  - Imagery can help to achieve this



# Thoughts of...

- Sleep itself...
  - Develop realistic expectations about sleep
  - Use positive, action-oriented, and realistic self-talk



# Monitor Self-Talk

- Avoid statements such as:
  - “I never sleep after a stressful shift”
  - “I always sleep poorly before I fly”
  - “I can’t fall asleep when I’m this angry”
- Deal with these situations and your feelings so that it is easier to calm the mind at bedtime
- “I will simply rest and relax to release the tension”
- “The amount of sleep is immaterial”

# Chatter

- Try to re-focus or replace thoughts with neutral topics
- Use relaxation or mindfulness techniques
  - Relax the eyes, tongue, and jaw
  - Body scan
  - Yoga nidra
  - Guided meditation
  - Awareness of breathing
  - Imagine being in a safe and relaxing place
  - Focus on objective or neutral mental activities

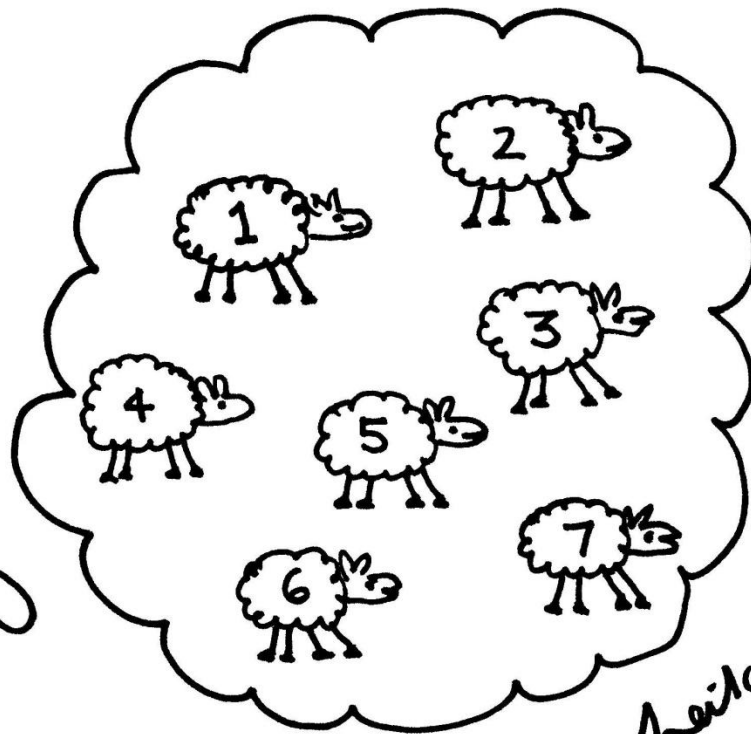
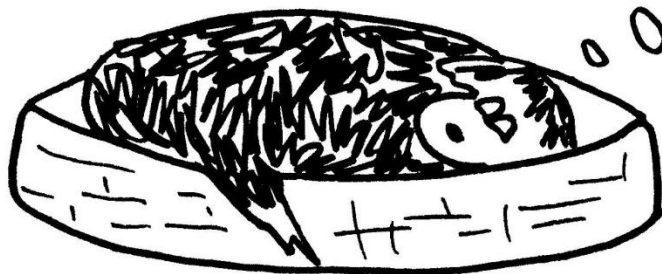


# Relaxing into Sleep

- **B**reathing – exercises, attention to breath
- **M**uscles – progressively relaxing
- **W**armth – imagining a sensation of warmth coming over the body in bed
  - Hot water bottle
  - Hot bath
- Relaxing music or white noise
- Lavender smells

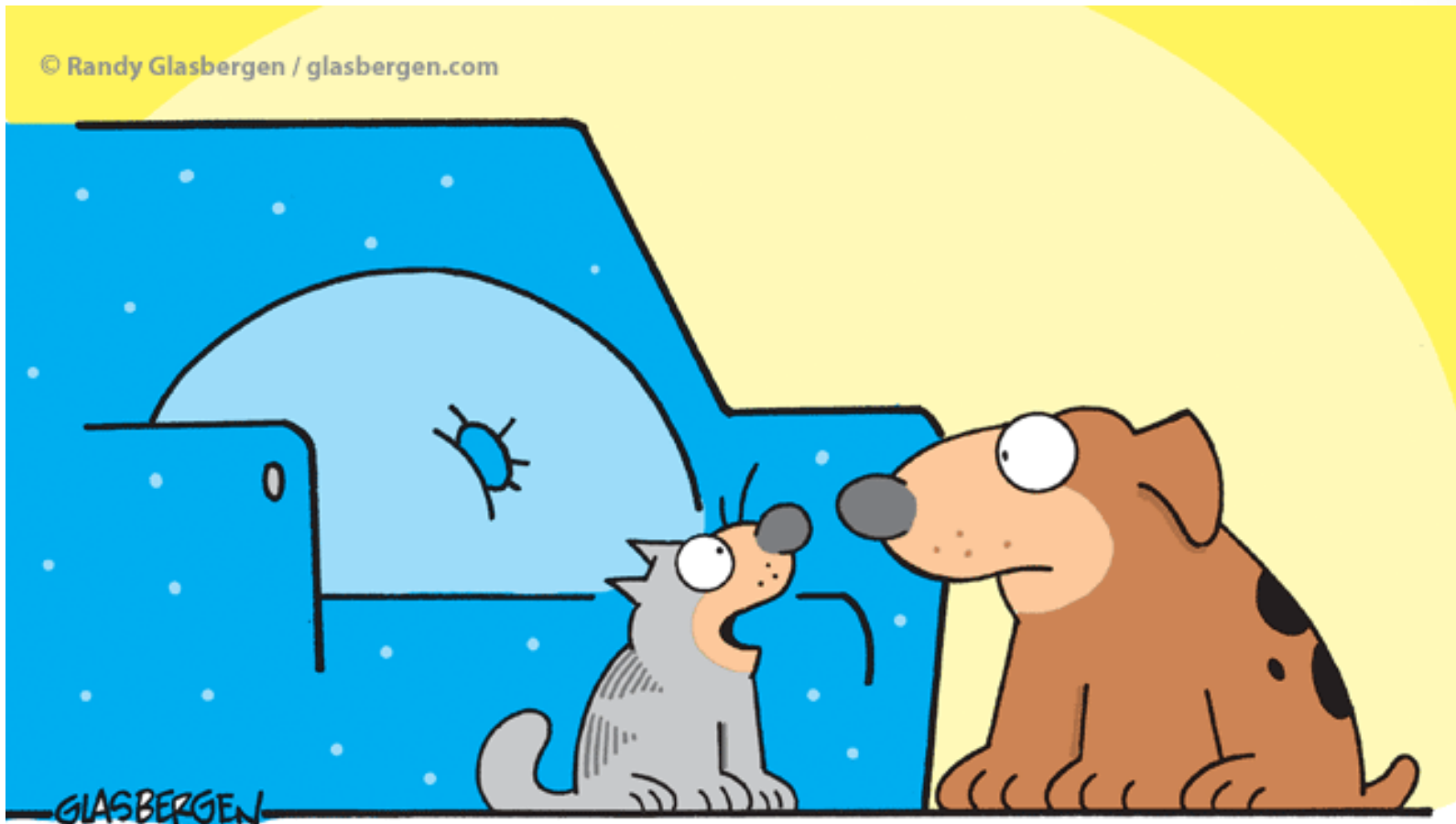


This won't work -  
it's too like my  
day job... woof  
woof...



peila

# Dos and Don'ts of Sleep Hygiene



**“I can get by on just 2 hours of sleep  
every day, as long as I nap for 14 hours.”**

# Do...

- Release daytime stress by physically relaxing throughout the day (stretching, releasing tension, performing deep relaxation techniques)
- Make lists so you do not have to remind yourself of things to be done
- Perform mental relaxation techniques
- Resolve conflicts before bedtime

# Do...

- Take calcium or magnesium as a natural sleep aid
- Consider passionflower herb to reduce anxiety associated with sleep
- Manage pain with appropriate medication, hot/cold packs, etc. so that they will take effect by bedtime
- Take prescription medications as directed

# Do...

- Expose yourself to outdoor light for a minimum of 1 hour daily
- Exercise for 30 minutes daily (ideally  $\geq$  5-6 hours before bedtime)
- Set an alarm for bedtime
- Avoid bright light (i.e., dim all lights) prior to bedtime
- Ensure you have a comfortable and supportive mattress

# Do...

- Go to bed when you have “geared down” enough that you can sleep
- Get up at the same time every day
- Go to bed at the same time every day
- Aim for 7-9 hours of sleep per day (including naps/sleep in front of the TV)





# Do...

- Keep the room temperature between 18-22°C (64-72°F) with comfortable humidity and good ventilation
- Sound proof the bedroom or use ear plugs or white noise to mask noise
- Keep light out of the bedroom with black-out blinds/curtains, turning off electronics, dimming alarm clocks, etc.
- Use the bed only for sleep or intimacy

# Don't...

- Take in caffeine 6-7 hours before bedtime (for most people that's after 4 PM)
- Drink alcohol 2-3 hours before bedtime
- Drink a large amount of water right before bedtime



# Don't...

- Eat large meals (especially high in fat, sugar, or preservatives) right before bedtime
- Eat spicy foods or foods that are difficult to digest before bedtime
- Eat foods that contain tyrosine (yeast, aged cheese, chocolate, fermented foods, milk – unless warm/hot)

# Don't...

- Go to bed hungry (if needed, eat a light snack [banana, apple, popcorn] 1-2 hours before bedtime) – foods high in L-tryptophan have traditionally been considered natural sleep aids (e.g., cashews, eggs, cottage cheese, turkey/chicken, warm/hot milk)



# Don't...

- Take long naps (> 20 minutes) in the evening
- Exercise rigorously immediately before bedtime



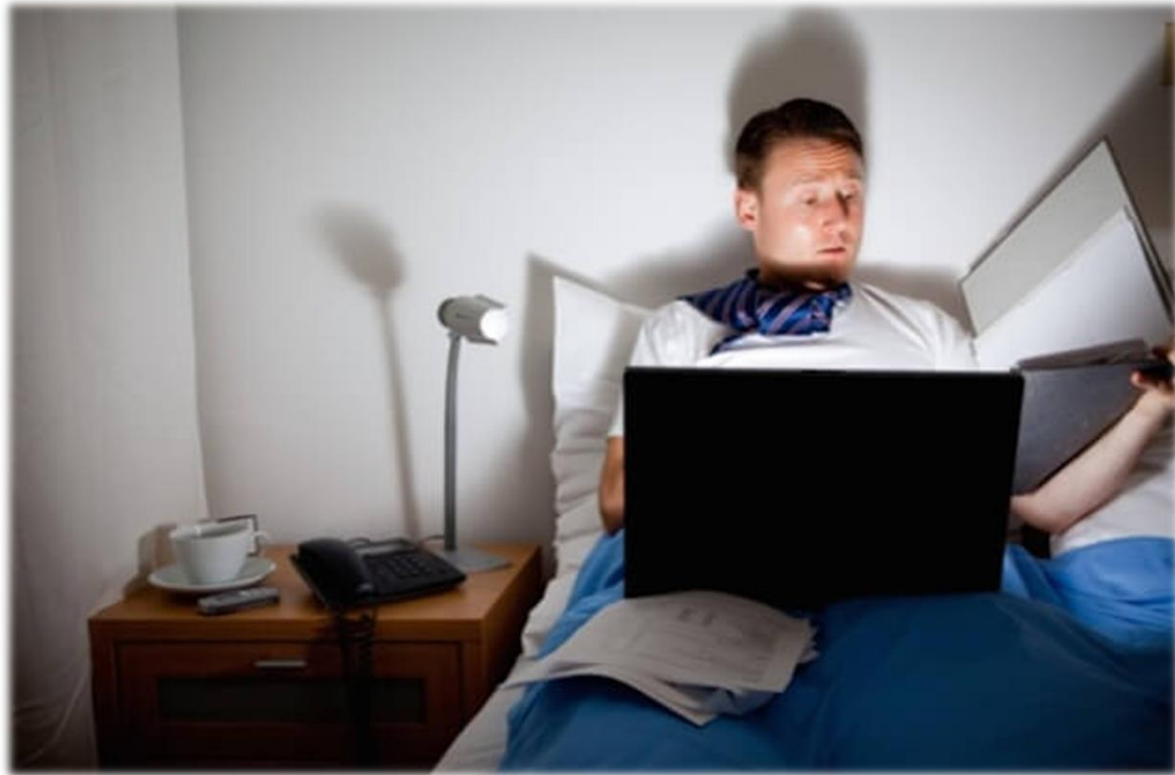
# Don't...

- Stay up late in an effort to become tired enough to sleep
- Look at the clock repeatedly



# Don't...

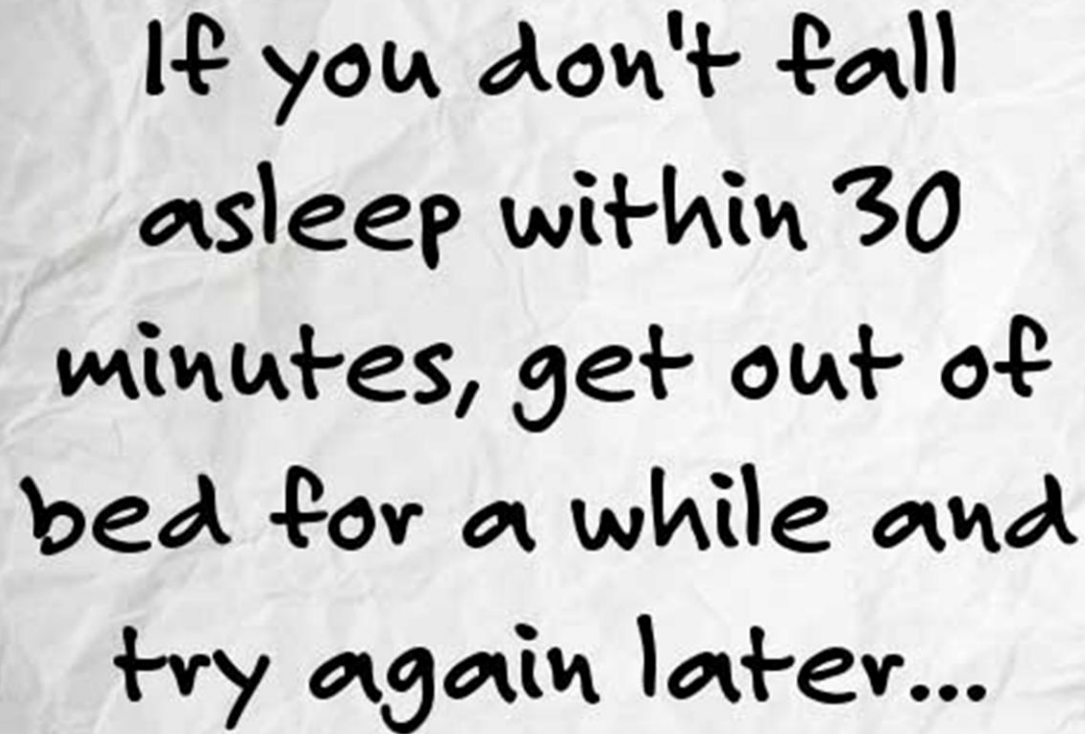
- Read, work, problem-solve, talk on the phone, argue, eat, worry, or watch TV in bed





# Don't...

- Lie in bed after you wake up



If you don't fall  
asleep within 30  
minutes, get out of  
bed for a while and  
try again later...

# Middle-of-the-night Awakenings

- After 20-25 minutes of lying awake in bed, get up and do something not stimulating
  - Do some light cleaning or the dishes
  - Read something boring
  - Listen to soft music
  - Do a puzzle
  - Meditate or journal
  - Coloring

Dear 3 am,  
We have got to stop  
meeting this way.  
I'd much rather sleep  
with you.

# Middle-of-the-night Awakenings

- Keep the lights dim or out of the direct line of vision (e.g., night light)
- Empty bladder
- Address pain, noise, temperature issues that might have woken you
- When calm enough to reasonably expect to sleep, repeat bedtime routine and go back to bed

# Don't...

- Share your bed with children or pets



# Don't...

- Use your bedside table as a charging station





# Don't...

- Plan to “bank” all of your sleep on the weekends



# Don't...

- Rely on sleeping pills except as a temporary fix







# Natural Sleep Aids



## Melatonin

- Effective for some people
- Assists with falling asleep and the quality of sleep
- Decreases jet lag
- Extended-release formulations available
- Not recommended long term
- 0.5 – 1 mg taken 30-45 min before bedtime

## L-Tryptophan

- Precursor to serotonin
- Effective for people with anxiety
- Assists with falling asleep and the quality of sleep
- Can also decrease teeth grinding during sleep
- 500 – 2000 mg taken 30-45 min before bedtime

# Don't...

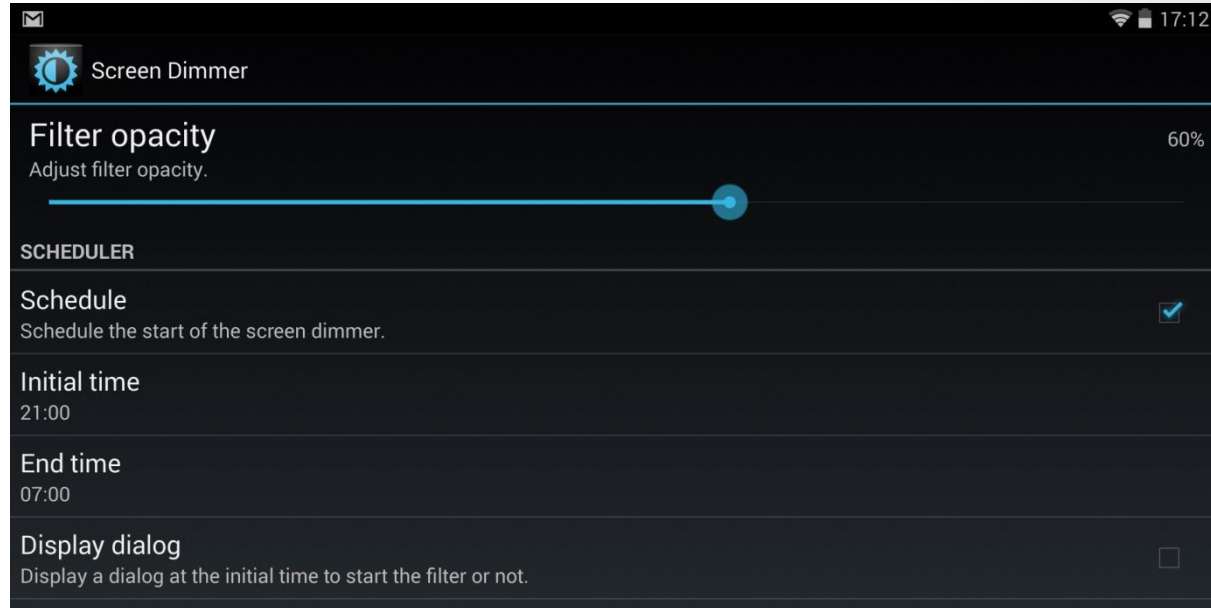
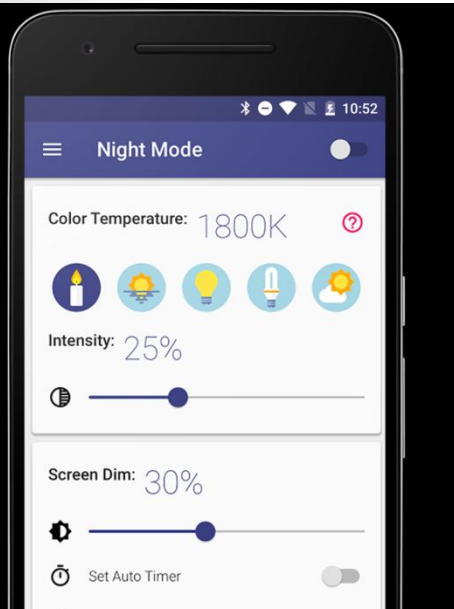
- Get in the habit of hitting the snooze button



# Don't...

- Use electronic devices or watch TV within 1-2 hours of bedtime





**f.lux®** software to make your life better

[Forum](#) [News](#) [Research](#) [FAQ](#)

Ever notice how people texting at night have that **eerie blue glow**?

Or wake up ready to write down the Next Great Idea, and get blinded by your computer screen?

During the day, computer screens look good—they're designed to **look like the sun**. But, at 9PM, 10PM, or 3AM, you probably shouldn't be looking at the sun.

## f.lux

f.lux fixes this: it makes the color of your computer's display adapt to the time of day, warm at night and like sunlight during the day.

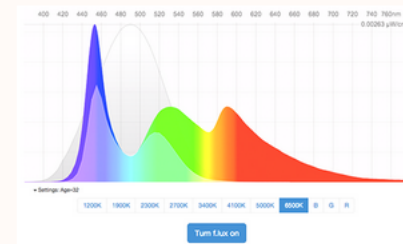
It's even possible that you're staying up too late because of your computer. You could use f.lux because it makes you sleep better, or you could just use it just because it makes your computer look better.

[Download f.lux](#)

Free for Windows.

(also available for [Mac](#), [Linux](#), and [iPhone/iPad](#))

How much blue light does f.lux remove? Find out with f.luxometer:



**f.lux**

[Like Page](#) 95k likes



**f.lux**

January 26 at 4:32pm

# Don't...

- Assume that everyone has the same chronotype



# What's your chronotype?

- Behavioral manifestation of the underlying circadian rhythm
- Determines when to sleep vs. do other activities (e.g., exercise, eat, work)
- Varies from person-to-person
- More complex than “lark” vs. “owl”





# Dr. Michael Breus

[www.thepowerofwhenquiz.com](http://www.thepowerofwhenquiz.com)



# So how's your sleep hygiene?

## Sleep Hygiene Test

[http://psychologytoday.tests.psychtests.com/take\\_test.php?idRegTest=1329](http://psychologytoday.tests.psychtests.com/take_test.php?idRegTest=1329)

SUMMARY

INTRO

GRAPHS

DETAILED  
RESULTS

STRENGTHS &  
LIMITATIONS

ADVICE

### Snapshot Report

#### Good Habits



*According to your sleep hygiene score, you have few, if any, unhealthy habits that could impact your ability to experience a relaxed night's slumber. You tend to listen to your body's cues, rather than fighting its natural rhythms. Examples of poor sleep habits that people often fall victim to include eating a heavy meal before bed, inconsistent bedtime hours, consumption of alcohol or caffeinated drinks late at night, and taking long afternoon naps, among other things.*



# Sleep Journal

- Used to identify differences between nights with good vs. bad sleep



# Questions?

[criticalcarevet@outlook.com](mailto:criticalcarevet@outlook.com)



**"If you have trouble falling asleep, lick your feet  
for a few minutes. It works for my cat!"**



Interested in learning  
more about veterinary  
wellness topics?

Visit:

[www.criticalcarevet.ca](http://www.criticalcarevet.ca)

