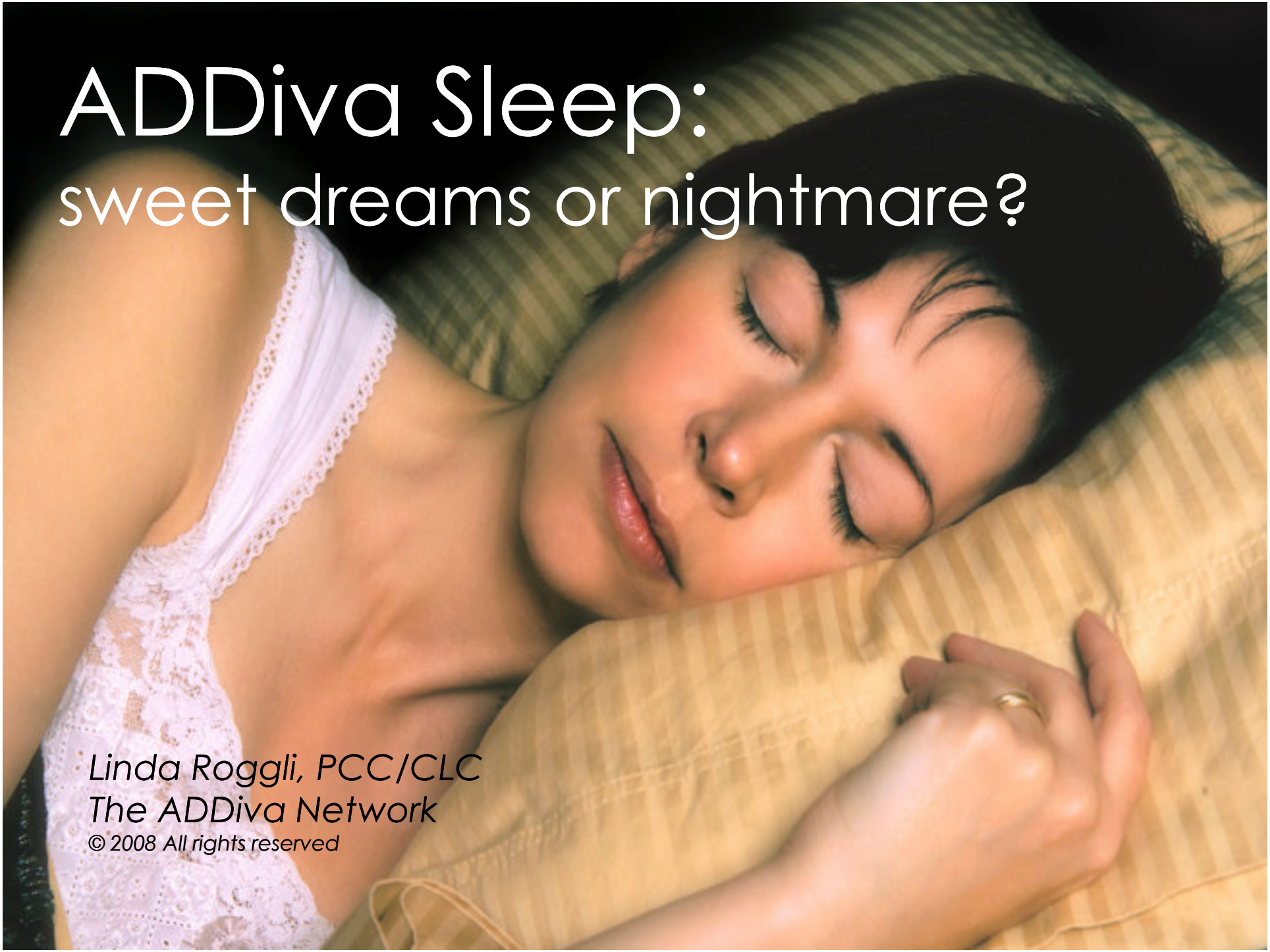


ADDiva Sleep:
sweet dreams or nightmare?

Linda Roggli, PCC/CLC
The ADDiva Network

How do you sleep?

Do you?

- Go to bed later than expected?
- Have trouble falling asleep?
- Sleep through the night?
- Wake up 2-3 times each night?
- Have trouble getting back to sleep if awakened?
- Feel rested in the morning?

How important is sleep?

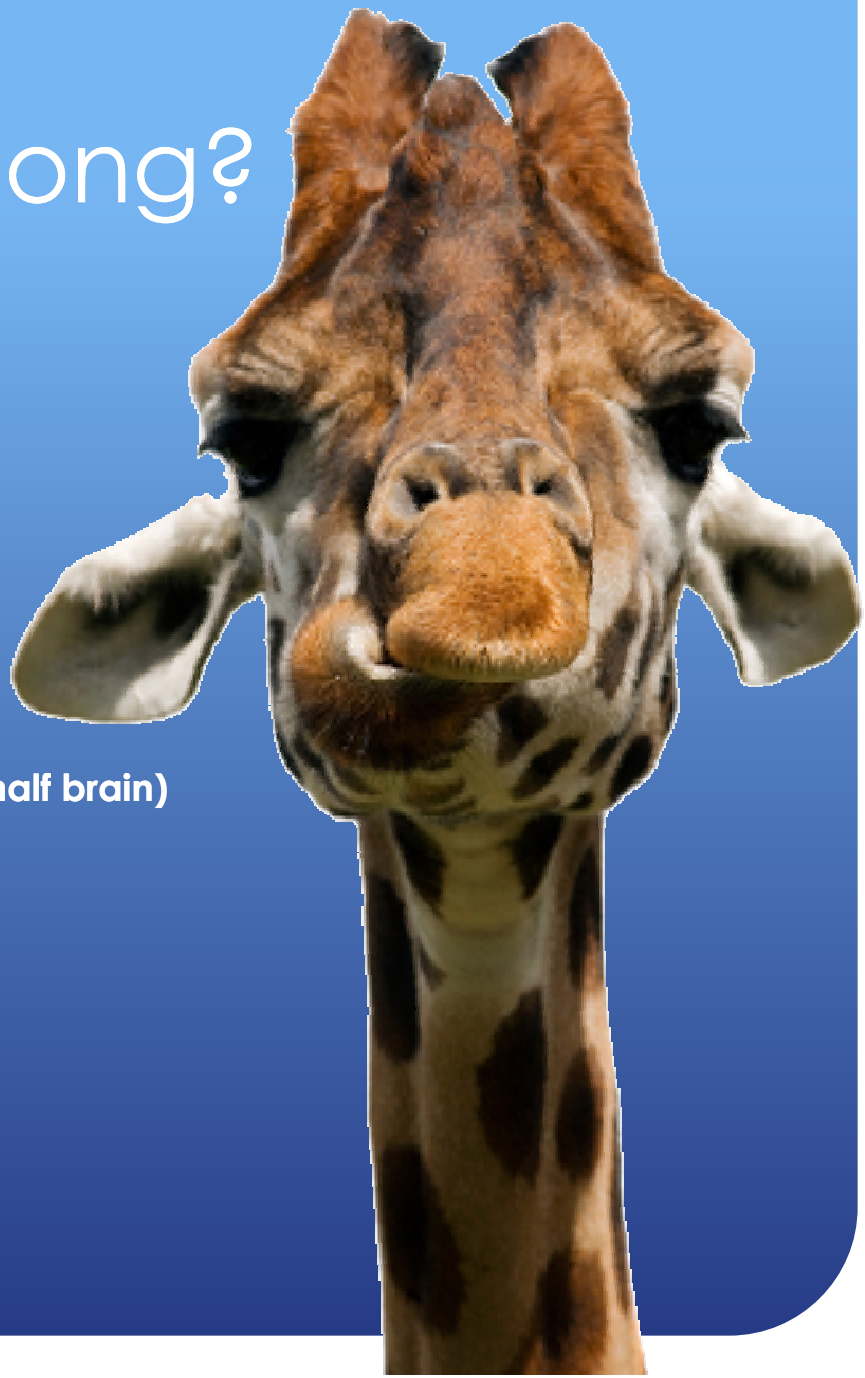
- New research shows lack of sleep (less than 7.5 hours a night) can lead to:
  - Type 2 diabetes
  - Heart disease
  - Obesity
  - Highway accidents
  - Headache
  - Stomach ailments
  - Joint problems
  - Higher death rate among women (2004 study)

What's your sleep debt?

- Sleep debt is cumulative
- We do not adapt to sleep deprivation
- You don't have to make up every hour of sleep missed to "catch up" on your sleep debt.
- If you missed 10 hours of sleep during a week, it can take only a few days to make up the debt by sleeping an extra hour or two each night
- If you've missed hundreds of hours of sleep over years, you can catch up in a matter of a few weeks.

They sleep HOW long?

- **Shrew: 0 hours**
- **Horses: 3 hours**
- **Cow: 4 hours**
- **Giraffe: 4.5 hours**
- **Rabbit: 8 hours**
- **Dolphin: 10 hours** (some sleep with half brain)
- **Dog: 10 hours**
- **Cat: 12.5 hours**
- **Sloth: 14.4 hours**
- **Bat: 19 hours**
- **Koala bear: 20 hours**



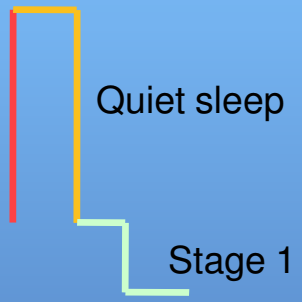
Quiet sleep – the prelude

Quiet sleep

- "Dropping off to sleep"
- "An idling brain in a moveable body"
- Close your eyes to shut out visual stimuli
- Brain settles into "alpha" waves
- A state of relaxed wakefulness, calm
- ADD brains – hard to shut down the thoughts

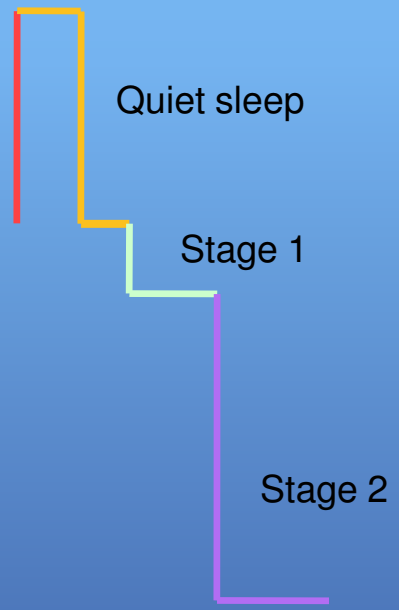
Sleep: Stage 1

- About five minutes in Stage 1 as you transition from quiet sleep
- Theta wave sleep
- Still alert enough to be awakened easily if needed
- Body temperature drops
- Eyes move slowly from side to side



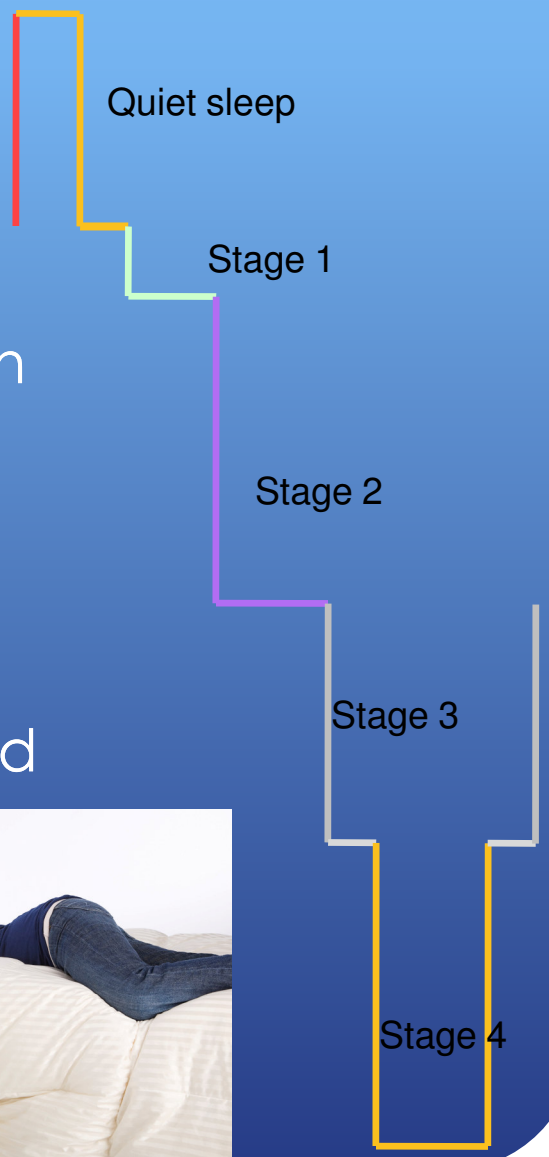
Sleep: Stage 2

- First time it's 10-20 minutes
- Eyes are usually still; heart rate and breathing are slower
- Brain activity is irregular – slowing down, but with bursts of activity – brain spindles that last half a second.
- About half your sleep time is in Stage 2



Sleep: Stage 3 & 4

- **Deep sleep**
- Slow brain waves – EEG shows delta waves at least half the time on a brain scan
- Blood pressure and pulse go 20-30% below normal
- Time for body to renew; pituitary gland releases growth hormone to repair tissues.
- Difficult to awaken

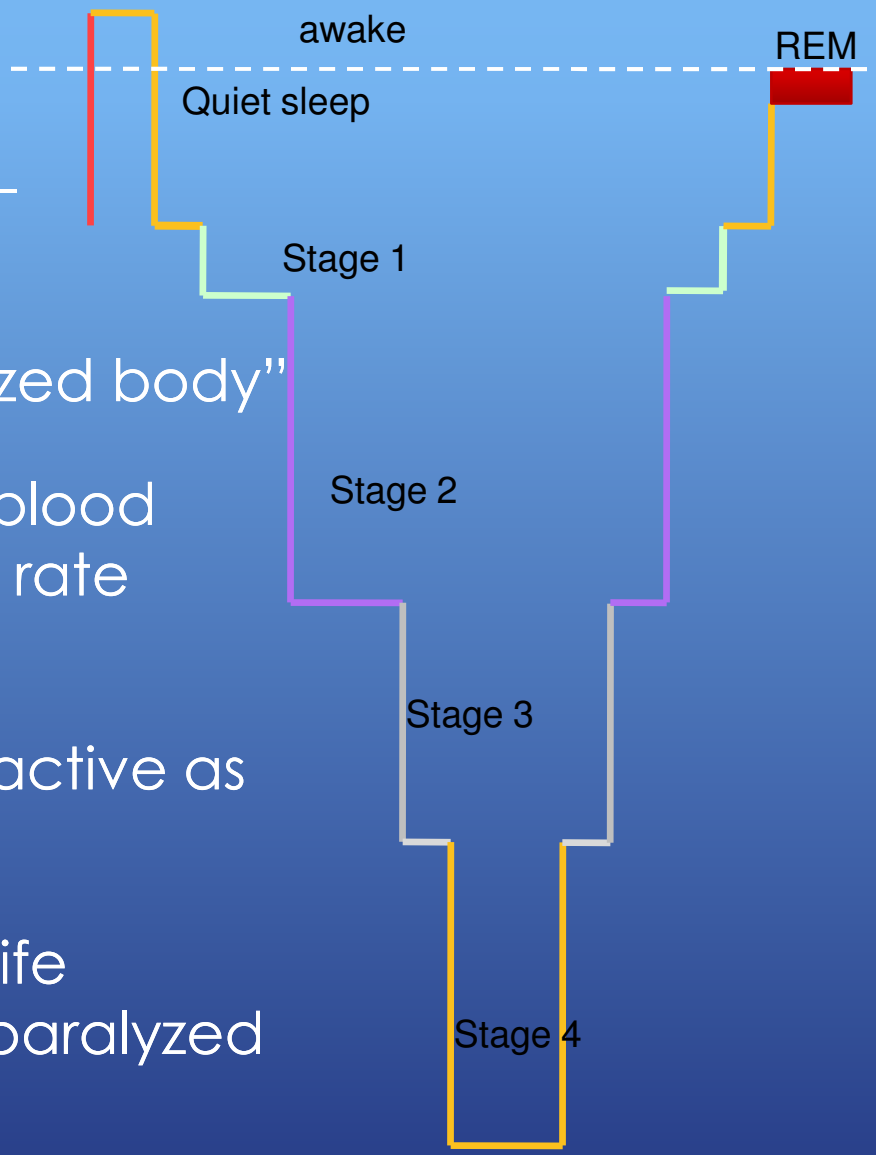


Sleep: Stage 3 & 4 (cont.)

- Researchers have found interleukin released during these stages – immune system building
- Young adults – 20% of sleep time; over 65 much less time in these stages
- When sleep deprived people finally get to sleep they move more quickly into Stage 3-4 – it's the most restorative rest.

Sleep: REM

- "Rapid Eye Movement" – you're dreaming!
- "Active brain in a paralyzed body"
- Brain races, eyes move, blood pressure increases, heart rate increases, breathing fast
- "Fight or flight" twice as active as when you are awake
- Muscles not needed for life support are temporarily paralyzed



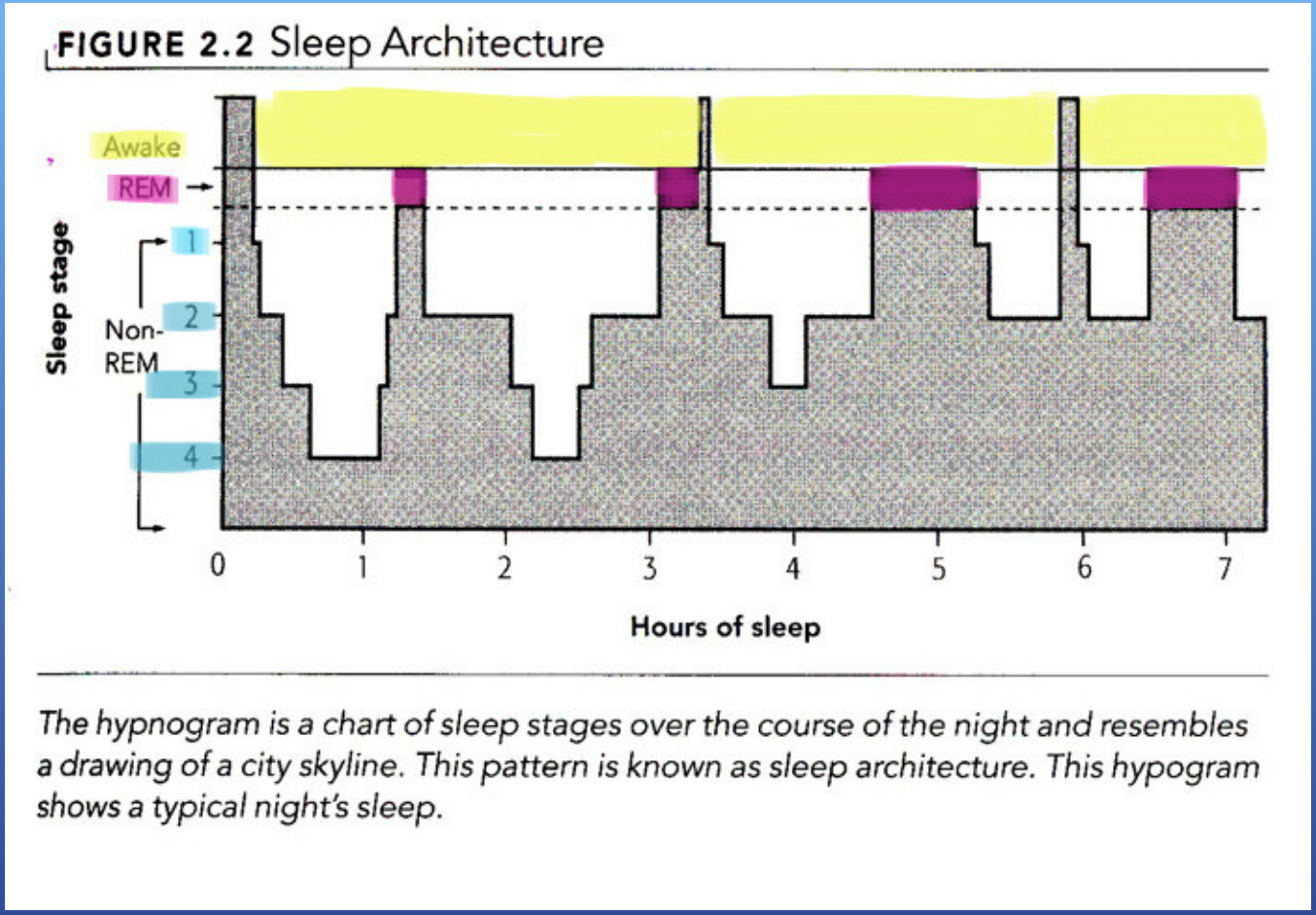
Sweet dreams!

- REM sleep helps memory and learning
- Learn something late in the day, REM sleep helps you remember it the next day (much better than staying up all night before a test)
- REM happens 3-5 times a night about every 90 minutes
- REM time increases as the night progresses

The patterns of sleep

- Less REM sleep early in the night
- Most deep sleep in first half of the night
- A balance between wakefulness and sleep
- Your internal biological clock controls body temperature, blood pressure, release of hormones (melatonin and cortisol), digestive juice secretion, urine production and timing of sleep and wakefulness

Sleep architecture*



**reprinted from The Harvard Medical Guide to a Good Night's Sleep" Lawrence Epstein, M.D Used with permission.*

SCN* – the nerve center

- Located just below the nerve tracts that take information from the eyes to the visual centers of the brain
- The retina connects to the SCN – explains the influence of light on circadian rhythm
- Light entering your eyes is the **most influential** mechanism that prevents sleep; darkness induces sleep via melatonin.

*Suprachiasmatic Nucleus – location of the internal clock

Melatonin

- Cells in the SCN have receptors for melatonin, a hormone produced in a predictable daily pattern
- Responding to darkness and light, melatonin levels climb in the late evening and decrease at dawn
- Oral melatonin has been shown to help reset the circadian clock if disrupted by jet lag (but not clinically recommended for chronic insomnia)

Light and sleep

- Our bodies are programmed to get up at dawn and go to sleep at dusk – the agrarian schedule
- Electric lights disrupted natural cycle
- Even a small amount of light at night will suppress melatonin, impeding sleep
- Computer monitors and TVs emit blue wave length light that suppresses melatonin ("Microsoft blue" like the dawn)

The Circadian Rhythm

- Strongest urge for sleep between 12 pm and dawn
- Highest sleepiness peak between 2 - 4 am
- Smaller sleepiness peak 12 hours later between 2:00 – 3:00 pm (why NOT take an afternoon nap??)
- In countries that take a siesta, night sleep is correspondingly reduced

Let go of waking vs go to sleep

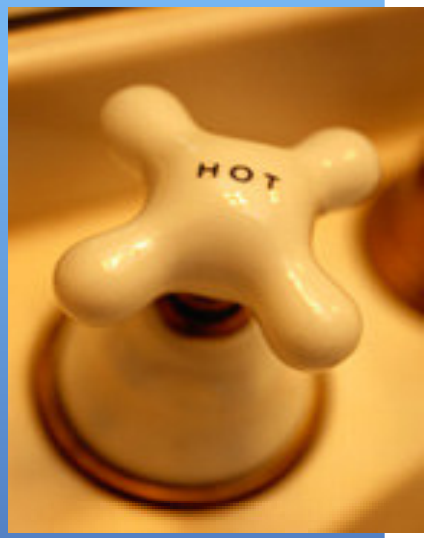
- Rubin Naiman, PhD*, says we need to surrender our daytime view of ourselves which we are reluctant to do (a kind of dying)
- He says sleep is a personal spiritual practice
- Look to what makes you feel safe (prayer, meditation, music)

**Sleep specialist and clinical assistant professor of medicine at Dr. Andrew Weil's Program in Integrative Medicine, the University of Arizona*

Typical insomniac

- Remains active right up to bedtime
- Still involved with tasks of the day – work, dinner, email
- Often has lights burning in the room in which he/she sleeps
- Menopausal women also dealing with temperature flares – hot and cold
- ADHD adults also coping with stimulant medication, caffeine, racing thoughts

How to get better sleep?



- **Exercise** (there it is AGAIN!) the earlier in the day the better – never after dinner (helps with serotonin which promotes sleep)
- **No heavy food** before bedtime (ice cream included)
- **REGULAR SLEEP PATTERN** – get up and go to bed at the same time even on weekends
- **Pre-sleep routine** – dim the lights in the house, turn off the TV and computer, take a warm bath, meditation, reading
- **Start winding down** at least 15 minutes before you go to bed; 30-60 minutes is even better

More good sleep tips

- **Set an alarm** to go TO bed, not just get OUT of bed.
- **Control noise** in the bedroom – ear plugs or white noise machine or fan to block noise
- **Block out light** – the darker the room, the better. Thick curtains, eye shades **THIS IS REALLY IMPORTANT**!!!
- **If you can't sleep after 20 minutes** get up and read or have a cup of chamomile tea

Some more good sleep ideas

- **Brain racing? Do a mind dump** – capture it on paper. Put a pad by the bed for midnight brain bursts
- **Take a half dose** of your stimulant medication – helps you FOCUS so you can sleep *(or it could keep you UP*)
- **Avoid evening naps** (the longer you stay awake the stronger your sleep drive) but if you need a nap, take it as early as possible
- **Limit caffeine** – the half life is 3-5 hours
- **Use alcohol cautiously** (helps you fall asleep but reduces Stage 3-4 sleep and REM sleep – plus you have to get up to go to the bathroom!

Even more sleep inducements

- **Make your bed comfy** – good mattress to avoid backaches perfect weight blankets, a just right pillow, comfy pjs
- **Keep the room cool** and well ventilated
- **Hide the clock** – so you don't obsess about how much sleep you AREN'T getting

Sleeping pills?

- Only for short term use even if they don't cause a sleep "hangover"
- Ambien® and Sonata® take only one month at a time; onset is within 20 minutes
- Lunesta® can be used for up to 6 months; onset is 30 minutes
- Current theory is that pills don't really give you better sleep, but create sleep "amnesia" so you **think** you slept better

Alternative sleepy time boosts

Over the counter Melatonin

- Helps reset circadian clock – good for jet lag
- New research shows it's not effective for insomnia except for those with Delayed Sleep Phase Disorder (DSP) who don't get sleepy "on time." It helps them get to sleep an average of 40 minutes earlier
- Short half life – no long term ill effects
- Can produce vivid dreams
- Controlled substance in Europe, Asia

More alternatives

Valarian

- Reported to be mildly sedating, but studies were flawed
- Side effects are dizziness, headache, itching, tummy upset
- Available over the counter in US
- Also causes vivid dreams
- Smells awful!

The flowers

Lavender

- Aromatherapy reported to help IF you like the smell. Otherwise not great idea but side effects are rare

Passionflower

- Often used with valerian, brewed as a tea

Chamomile

- Usually made into tea
- High doses can cause vomiting
- Avoid this if you are allergic to ragweed

Behavioral treatments

Reconditioning

- No naps
- Strict schedule of waking – set alarm
- The Six Rules (go to bed only when sleepy; get up if wakeful, restrict bed to sleep/sex)

Deep breathing

- From the diaphragm

Progressive relaxation

- Body scan, move through entire body to relax

Avoiding sleep to get to sleep

Sleep restriction method

- Spend less time in bed for more efficient sleep
- Begin to consolidate sleep into longer block
- Slowly get into regular sleep pattern
- Estimate amount of sleep you are getting, then sleep exactly that amount (5 hours, then go to bed at 2 am- no earlier)
- Gradually add to sleep time in 15 minute increments – no naps!

More relaxation

- Meditation
- Visualization
- Biofeedback
- Cognitive behavioral therapy (CBT)
  - ✓ Changing the belief about the event can change the effect of the event
  - ✓ Sometimes recommended for ADHD treatment as well

Dr. Rubin's suggestions

- Rest practices (yoga, meditation, prayer, neurofeedback, self hypnosis)
- The 4-7-8 breath
    1. Exhale completely through mouth; close mouth
    2. Inhale to the count of 4
    3. Hold your breath for the count of 7
    4. Exhale through mouth for a count of 8 – repeat
- Blue light blockers -Eyeglasses and light bulbs that filter out blue wavelengths of light that suppress melatonin (not the same as blue-blocker sunglasses – do you wear YOUR sunglasses at night?)

True or false?

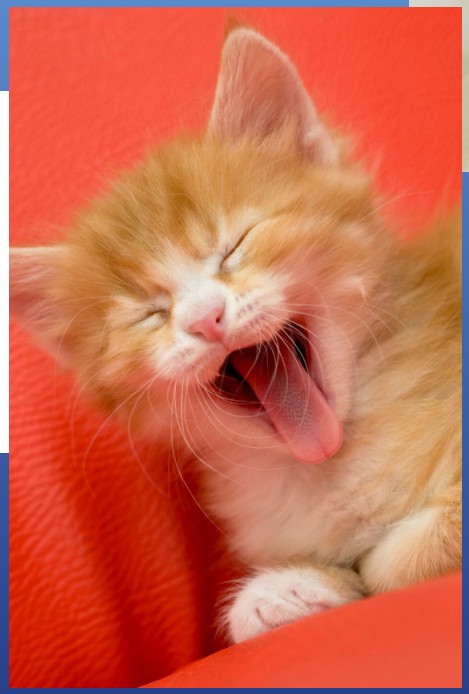
- You need more sleep as you get older
- Alcohol helps you sleep better
- Snoring can be a signal of a serious disorder
- You can train yourself to get by on five or six hours of sleep
- Listening to recordings while you sleep helps you learn
- Napping is bad for you because it keeps you up at night
- You can sleep too much

True or false?

- Caffeine can take effect in 15 minutes
- Chocolate has as much caffeine as soda or tea
- Over the counter pain medication has more caffeine than brewed tea
- An 8 oz. mug of coffee has 3-4 much caffeine as the same soda

Yawning is contagious

- Keep company with sleepy people and maybe you'll catch it?
- ZZZzzzzzz- it's time for BED….



Resources/Sources

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- *National Sleep Foundation website: www.sleepfoundation.org*
- *https://www.lowbluelights.com/ for blue light blockers*
- *linda@addiva.net 919-309-9300*