Rest Easy: A Practical Approach to Treating Insomnia

Presented By: Steven Krozer, PMHNP-BC

Steven Krozer

CEO, PMHNP-BC, MSN, BSN, RN

Originally from Connecticut, Steve found his way to South Carolina after biking across the country for a mental health charity. He completed his education at Vanderbilt University and is a board-certified psychiatric nurse practitioner with prescriptive authority. He is qualified to work with clients of any age and specializes in psychiatric medication management and integrated therapy.

Steve founded iTrust Wellness in the hopes of creating an office that helps clients find relief, hope, and knowledge for both the present and future. His passion for mental health has spurred him to pursue innovative technologies and solutions in the course of developing care for each individual. Steve is dedicated to formulating an evidence-based treatment plan that leads to holistic well-being for each client, improving both symptoms and lifestyles.

Steve has worked in both inpatient and outpatient settings as well as local community mental health centers. He has had the opportunity to present educational material for students and professionals alike, including engagements at Anderson University and the University of South Carolina. He regularly works closely with psychiatric nurse practitioner students for resident teaching and the provision of clinical experience. His love of the outdoors frequently leads him to hiking or biking to exercise both mind and body. He enjoys any adventure he is presented with, whether it be international or here in Greenville.

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WELLNESS

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Program Overview

- What is "sleep" and why is it important?
- Understanding insomnia
- Identifying potential causes or diagnoses contributing to insomnia

- Discussion of treatment options for insomnia
  - Sleep Hygiene / Holistic Approaches
  - Medical
  - Psychotherapy
  - Pharmacological

Part 1: What is sleep?

- The natural, easily reversible periodic state of many living things that is marked by the absence of wakefulness and by the loss of consciousness of one's surroundings, is accompanied by a typical body posture (such as lying down with the eyes closed), the occurrence of dreaming, and changes in brain activity and physiological functioning, is made up of cycles of non-REM sleep and REM sleep, and is usually considered essential to the restoration and recovery of vital bodily and mental functions

Merriam-Webster. (2019). *Definition of SLEEP*. Merriam-Webster.com. https://www.merriam-webster.com/dictionary/sleep

Why is sleep important?

Essential for Life

Sleep is as important to our lives as the food we eat and the air we breathe.

Growth and Brain Function

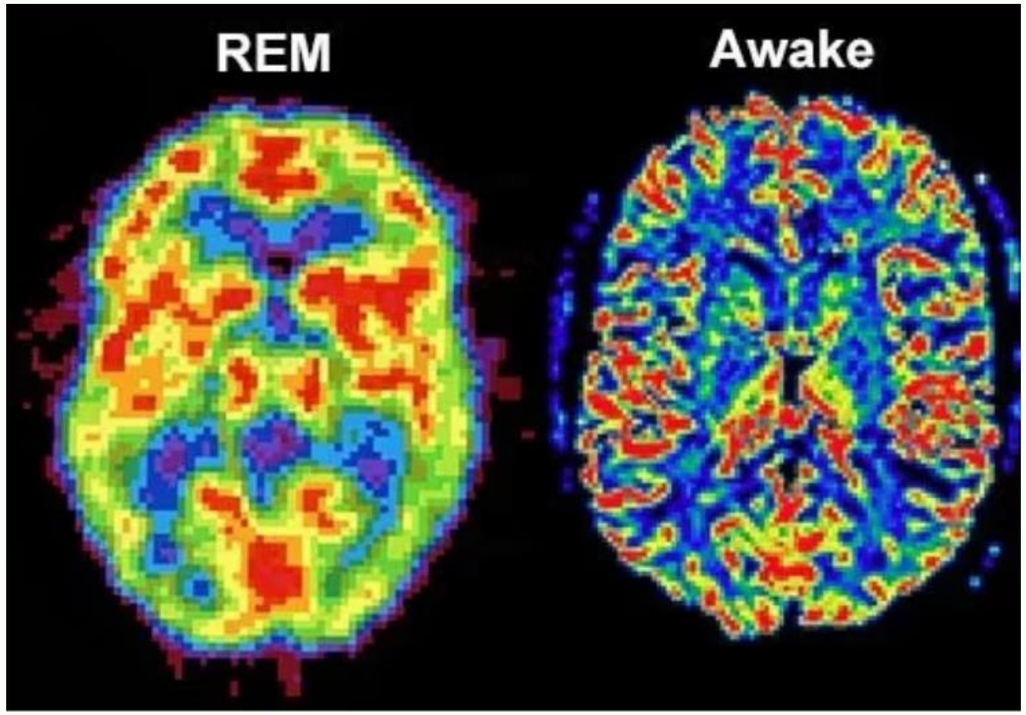
We need it for growth and repair of the body, healthy brain function, and the consolidation of memories.

Physical Health

Lack of sleep can lead to serious health problems, such as a weakened endocrine, immune, or cardiovascular system.

Mental Wellbeing

Lack of sleep can lead to mental health issues including anxiety, depression, and concentration deficits.



What happens during sleep?

- During normal sleep, a person cycles through REM (rapid eye movement) and non-REM phases
- REM sleep is when "dreaming" takes place - eyes dart back and forth but the body is still; the brain is active and working to seal in memories
- Before reaching REM sleep, the body must pass through other "stages" of non-REM sleep, each serving a role

Understanding the Stages of our Sleep Cycle

Stage 1: The Bridge

- *No vital sign changes*
- *"Entrance to sleep"*
- *5-10 minutes*

Understanding the Stages of our Sleep Cycle

Stage 2: Onset

- Vital sign and cognitive changes: breathing is regular, heart rate slows, body temp drops
- Brain begins to disengage from surroundings

Understanding the Stages of our Sleep Cycle

Stages 3 (deep sleep) & 4 (REM)

- Vital sign changes: blood pressure drops, breathing slows, muscles relax
- Growth Hormones (responsible for development and repair) are released
- Deepest levels of restorative sleep, includes rapid eye movement and dreaming

Understanding the Sleep Cycles: How do they shift?

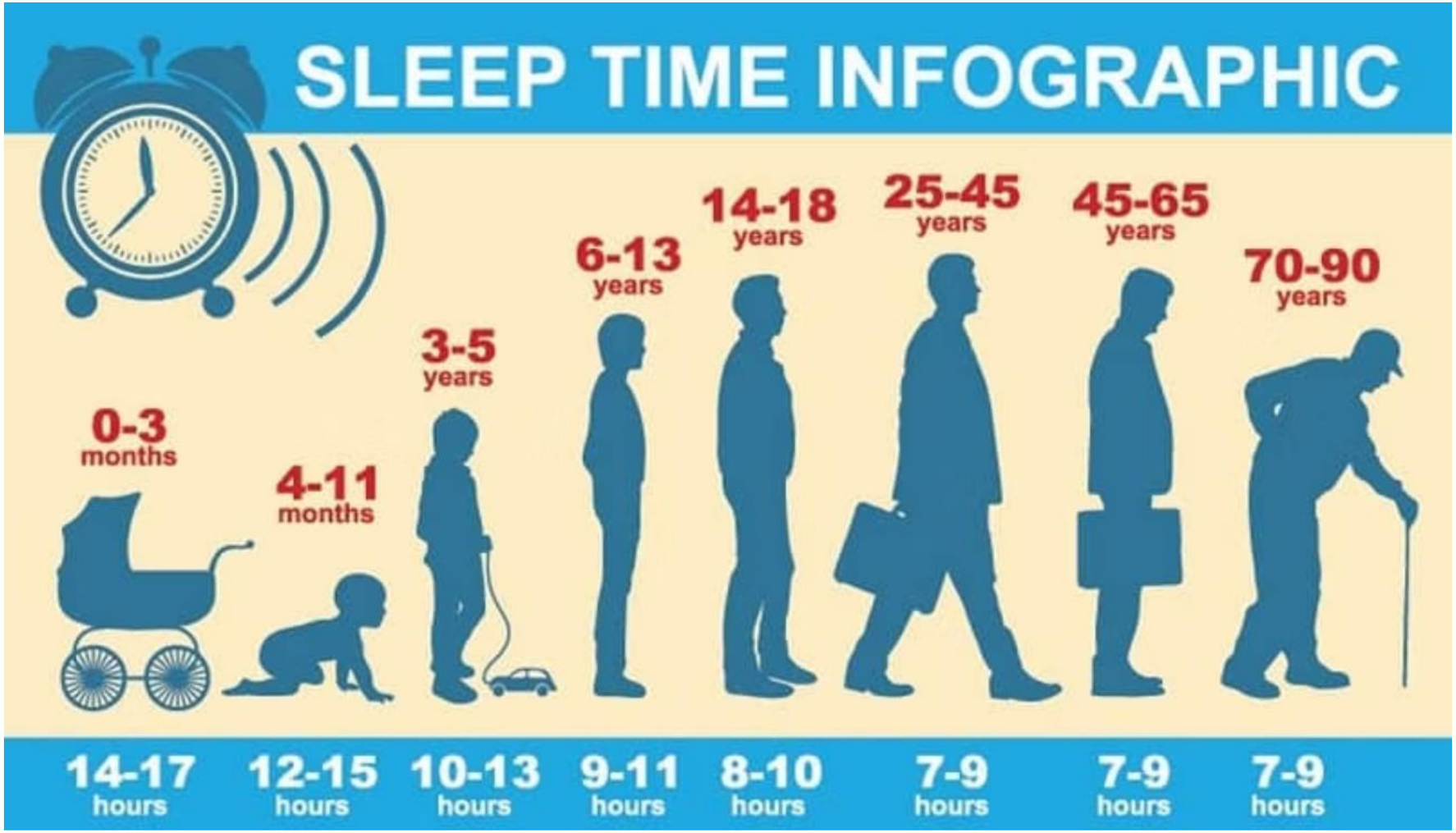
1. *Stages 3 & 4 of Sleep, also known as REM sleep, occurs approximately 90 minutes after initially falling asleep*

2. *REM sleep can last 10 minutes to 60 minutes, with each successive REM period becoming longer and longer*

3. *During sleep, the brain goes through something of a 'dance' – it shifts from awake to stage 1 to stage 2 to stage 3 and 4 to stage 2 and then to stage 3 and 4 again*

4. *On average, adults go through five cycles of non-REM and REM sleep per night*

How much sleep is needed?



So what happens when sleep doesn’t go as planned?

Insomnia

Part 2: Understanding Insomnia

- Insomnia includes problems falling asleep or staying asleep, waking too early, or having sleep that doesn't feel restorative
- Insomnia is the most common sleep disorder
- Other sleep disorders include obstructive sleep apnea, restless legs syndrome, and narcolepsy
- As medical professionals, we want to understand the TIME FRAME that the patient is suffering from insomnia and we also want to understand the CAUSE

Acute vs. Chronic Insomnia (Time)

Acute Insomnia

is often caused by a stressful life event and lasts for less than three months

Chronic Insomnia

describes a pattern of insomnia in which sleeplessness occurs at least three times a week and persists for three months or longer

Primary vs. Secondary Insomnia (Cause)

PRIMARY INSOMNIA

PRIMARY INSOMNIA refers to sleeplessness that doesn't result from an existing medical or mental health condition, or the use or misuse of a medication or substance.

The main culprits? Stress and the many challenges of everyday life.

SECONDARY INSOMNIA

SECONDARY INSOMNIA is sleeplessness that occurs as a result of an underlying health problem.

Example: Urinary tract infection, Hyperthyroidism

Prevalence of Insomnia

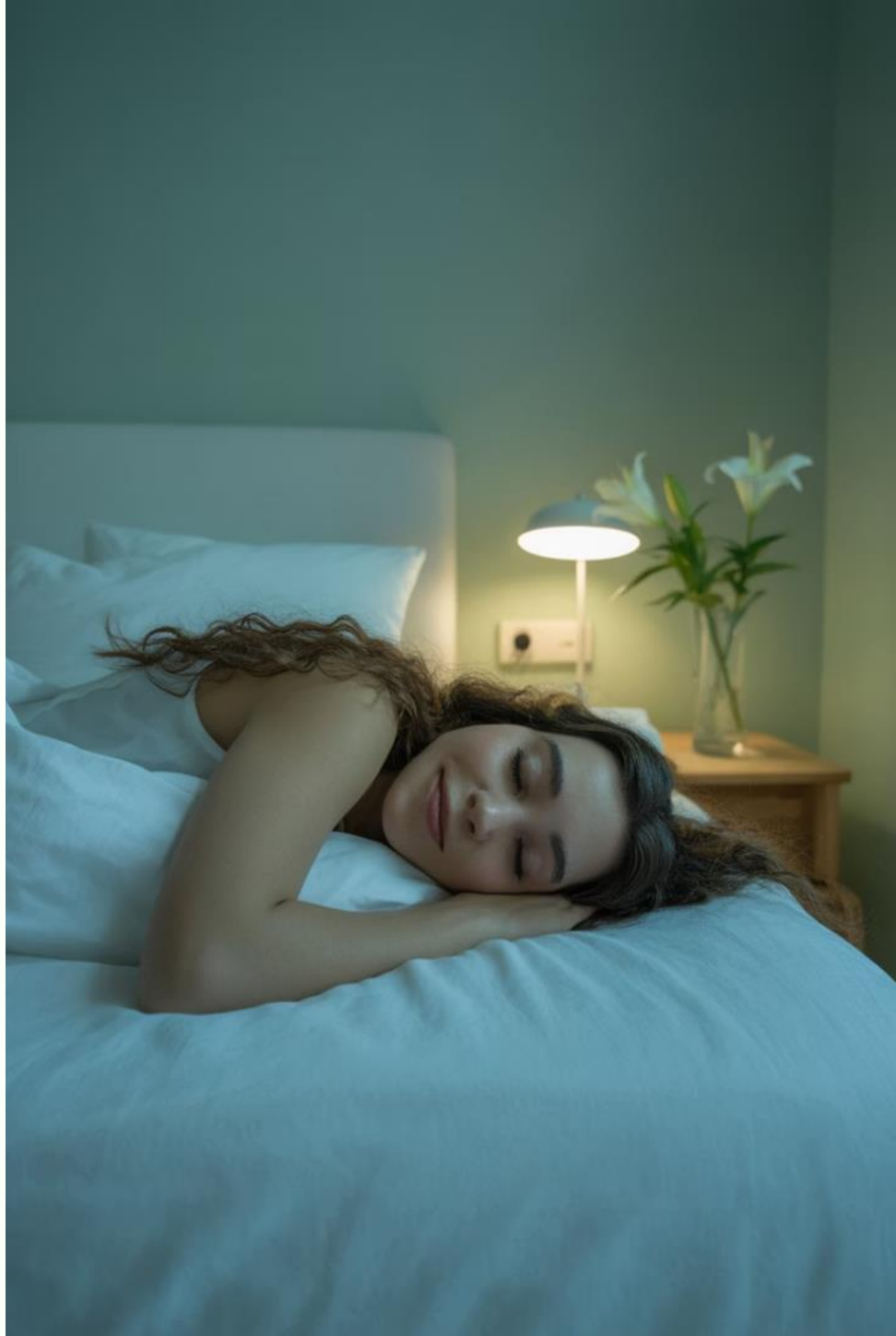
- 1 in 3 US adults report having insomnia, with middle-aged and older adults being most common

- 40% higher risk for developing insomnia for women compared to men

- 35 percent of US adults say they sleep less than 7 hours per night

- Time in bed does not equal quality sleep

- In a study surveying 500,000 adults, 7 hours was found to be the optimal amount of time for adults as a predictor for optimal cognitive performance and mental health



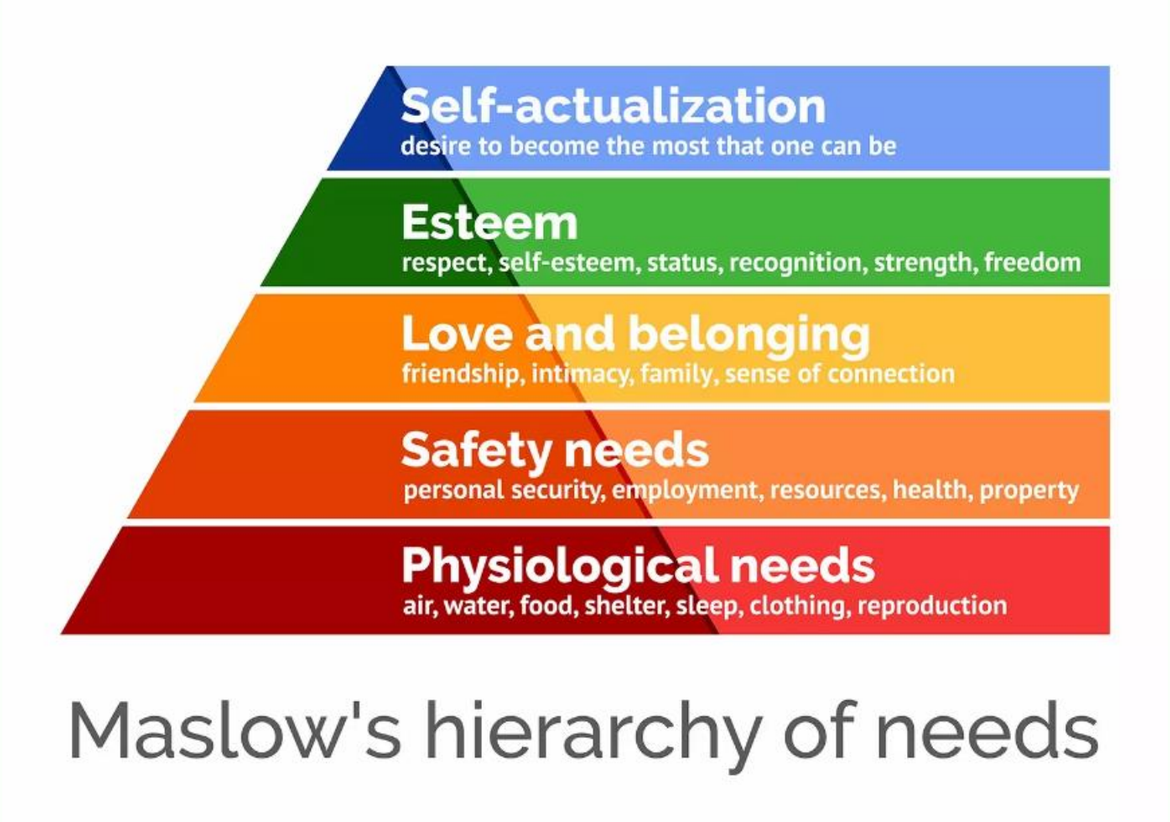
Symptoms of Insomnia

Short Term Effects

fatigue, daytime sleepiness, moodiness, upset stomach, headache, or problems concentrating and paying attention.

Long Term Effects (medical)

weakened endocrine, immune, or cardiovascular system; negative mental health symptoms, such as anxiety and depression

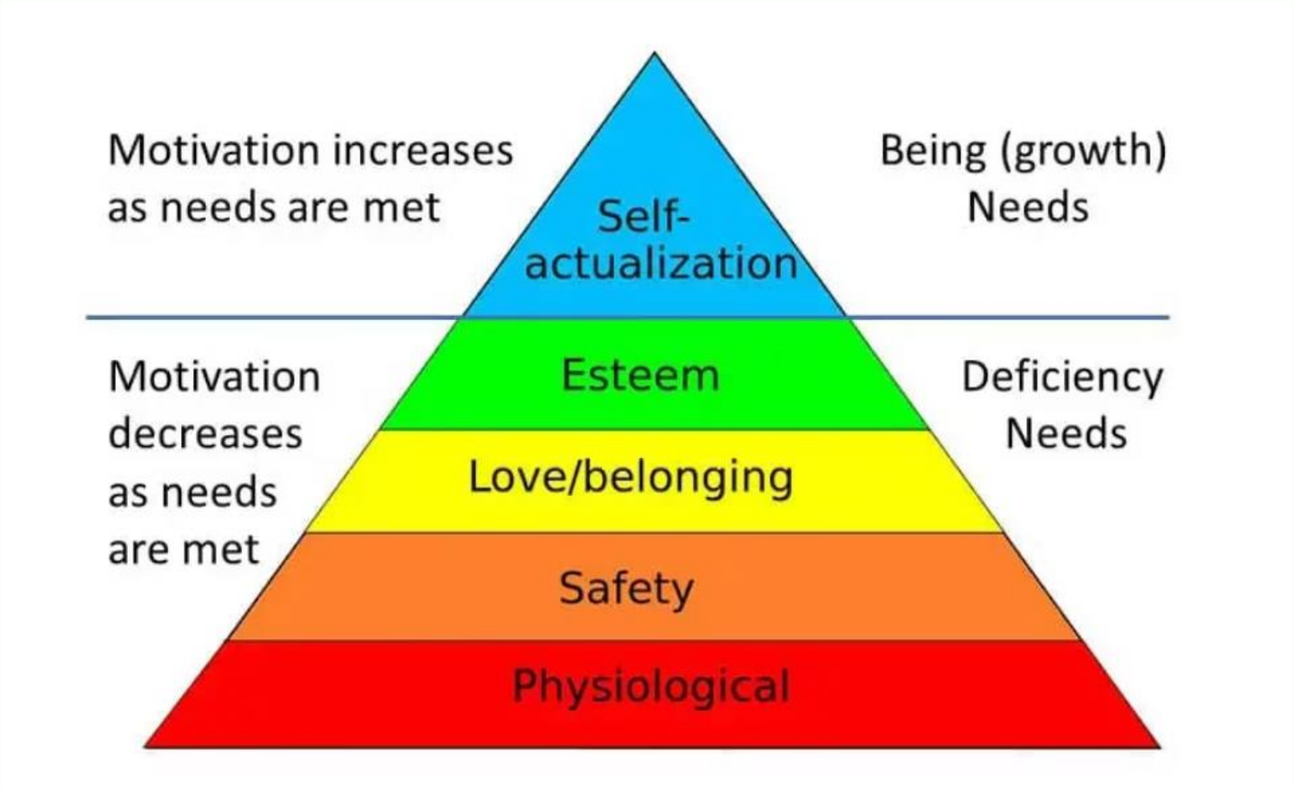


***** Physiological needs - these are biological requirements for human survival, e.g. air, food, drink, shelter, clothing, warmth, sex, sleep.***

If these needs are not satisfied the human body cannot function optimally. Maslow considered physiological needs the most important as all the other needs become secondary until these needs are met.

TIME is the most important factor when considering a prognosis and treatment in the medical industry

- If the root cause of insomnia is determined in a timely fashion and effective treatment is administered, patient outcome is superior



What do you have TIME to screen for in your visit? Are you the best professional to treat insomnia?

- We need to consider all variables to help us understand the extent of issues and to make a proper diagnosis and subsequent treatment plan:
  - Demographics, medical and mental health history, employment history, travel history, environmental stressors, substance use, electronic use, sleep schedule, acute or chronic, family dynamics (children or acting as caregiver,) current medications, and who is sleeping in bed (pets, etc.)?

Part 3: Identifying potential causes or diagnoses contributing to insomnia

- Best advice: start high level and then get more specific
- LOOK at the patient - is there anything immediately that comes to mind that could be a cause?
- IDENTIFY the actual or theoretical cause FIRST before recommending treatments, as we may be wasting time and contributing to the patient to self-medicate to treat
- REFER patient to appropriate specialist SOONER if you are not confident in being able to identify cause quickly

DESCRIBE YOUR INSOMNIA AND SLEEP HABITS:

How long have you had difficulty sleeping?

_____

_____

_____

On average, how many hours do you sleep per night? ☐

Which do you have trouble with?

☐ Falling asleep ☐ Staying asleep ☐ Both

Do you have a consistent sleep schedule?

☐ Yes ☐ No

How would you rate the quality of your sleep overall? *(check one)*

On most days, how do you feel when you wake up? *(check one)*

Has your lack of sleep and/or poor-quality sleep negatively affected your productivity during the day?

☐ Yes ☐ No

How often do you exercise?

☐ Never ☐ 1–3 times per week ☐ 4–5 times per week ☐ Daily

BEFORE GOING TO SLEEP

In the hours before going to bed, how often do you drink any of the following beverages?

Caffeinated drinks
(coffee, tea, soft drinks)
☐ Never
☐ 1–3 times per week
☐ 4–5 times per week
☐ Every night

Alcoholic beverages
☐ Never
☐ 1–3 times per week
☐ 4–5 times per week
☐ Every night

Have you ever used a sleep aid? *(check all that apply)*

☐ No
☐ Yes, over-the-counter product
☐ Yes, prescription medication

How often do you use electronic devices prior to going to bed? *(check one)*

☐ Never
☐ 1–3 times per week
☐ 4–5 times per week
☐ Every night

Example questions to ask in an interview for determining a potential cause of insomnia:

- Describe your irregular sleep or insomnia to me [issues falling asleep, staying asleep, waking up early?]
- What medications do you take that are not for sleep?
- Have you ever or are you currently taking medications or supplements for sleep?
- What medical problems do you have?
- When was your last physical or laboratory tests?
- Do you have a history of mental health diagnoses?
- Do you sleep normally sometimes and abnormally sometimes?
- Do you have a regular nighttime routine?
- Tell me about electronic usage at night?
- What does your sleep partner say about your insomnia?
- Who sleeps with you at night? [46% of Americans sleep with pets]

Screening for Secondary Insomnia

Medical History

- *- Screen for previous history of: Thyroid, Asthma, Diabetes, Chronic Pain*
- *- Is a previous medical condition being managed by specialist?*
- *- Has pt. ever had sleep study (r/o OSA, narcolepsy, etc.)*
- *- When were last labs? Magnesium [restless legs], Vitamin D [depression, anxiety], Thyroid Panel, Estrogen / Hormone levels, Hemoglobin A1C*

Mental Health History

- *PHQ-9 / GAD-7*
- Bipolar disorder
- Depression
- Anxiety
- Insomnia, individual / family hx

Screening for Secondary Insomnia

Medications:

Currently taking Mental Health medications?

[RISK FACTOR, REFER TO SPECIALIST]

Any new medications started?

[Drug-Drug interactions - Ex: ketoconazole and atypical antipsychotic; side effects from new med]

Supplements:

- Melatonin, St. John's Wort, Kratom, CBD

Let's say you have ruled out Secondary Insomnia and/or treated appropriately and Insomnia Symptoms still exist...

REFER

if you are not sure of exact or possible cause of patient's insomnia

EDUCATE

the patient of appropriate sleep hygiene in the interim of effective treatment

TREAT

insomnia effectively and rapidly; remember, sleep is a CORE PHYSIOLOGICAL FUNCTION!

Treating Insomnia (Wellness Approach)

Recommend a consistent bedtime

Going to bed and getting up at roughly the same time each day may be the single best habit a person can develop

Exercise regularly

But not within 4 hrs of sleep time (at least 20-30 min)

Stay cool

Bedroom at lower temperature = better sleep

Be mindful of naps and oversleeping

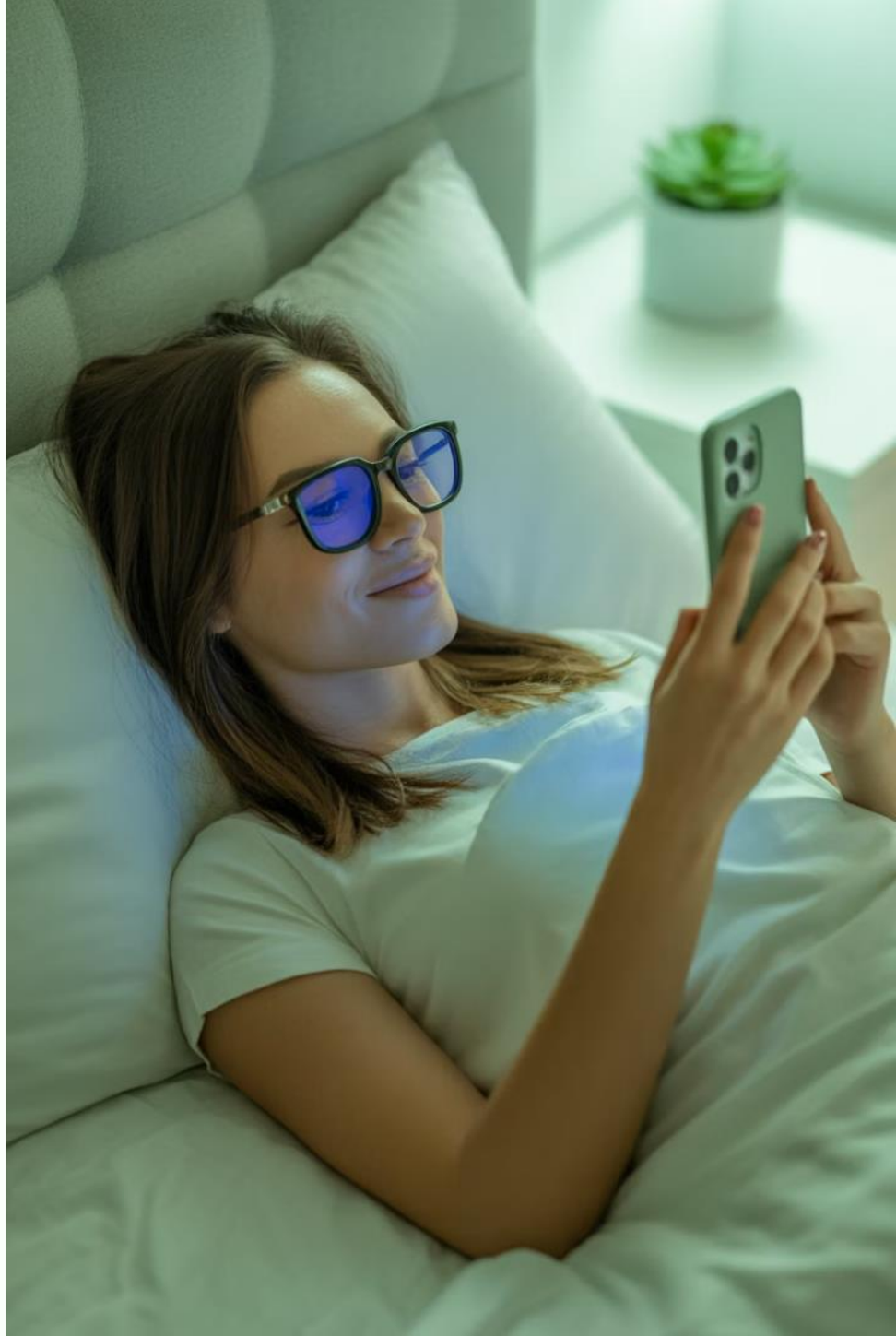
20-30 min at most during day

De-stress before bedtime

No electronics, blue light blocking goggles

Go to bed a bit hungry

Don't want reflux, etc



Tried and True Wellness Recommendations

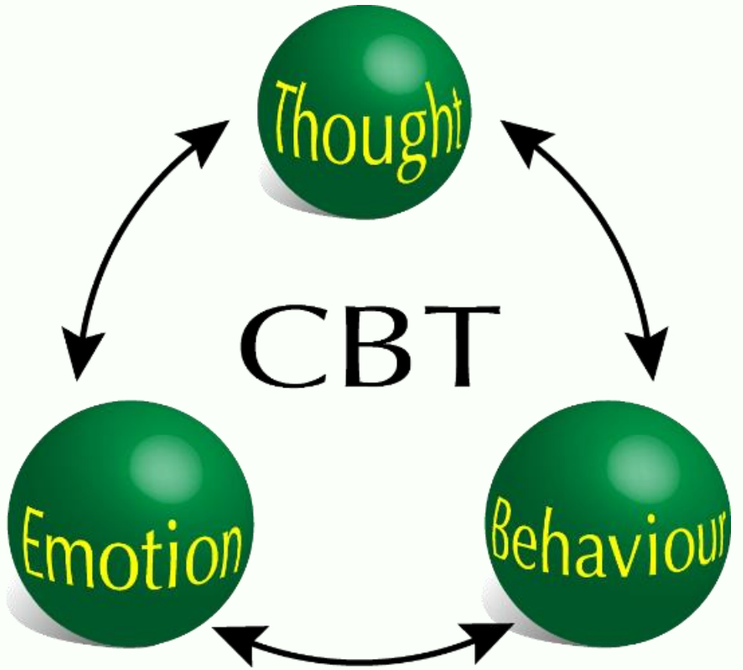
- Aim for bedtime between 9pm and 11pm
- Make a cup of chamomile tea with whole milk
- Take a warm shower before bed
- Read a book, journal, or practice mindfulness prior to bed - no electronics, tv
- Pets don't sleep in the bed
- Take prescribed nighttime/sleep medications 30 min to 1 hour before planned bedtime
- Take recommended supplements 30 min to 1 hour before planned bedtime

Supplement Stack Recommendations (30 min to 1 hr before bed) – "Sleep Juice"

- Chamomile Tea w/ Whole Milk
- L-Theanine (400-600mg)
- Glycine (4 grams)
- Melatonin (liquid) 1mg
- Magnesium Supplement (CALM Magnesium Citrate Powder, Magnesium L-Threonate, Magnesium Glycinate)
- [Why not supplements like Valerian Root, Lemon Balm, CBD, etc?]

Psychotherapeutic Recommendations for Insomnia

- Cognitive Behavioral Therapy for Insomnia (CBT-I)
  - Therapy for Insomnia (CBT-I) This type of therapy involves working with a professional to uncover unhealthy thoughts and behaviors that might be interfering with sleep
- Distraction / Mindfulness
  - Instead of staring at the ceiling in the middle of the night, try counting backward from 300 by threes
  - Imagine a wheel spinning, follow it with your eyes while laying in bed and attempting to fall asleep



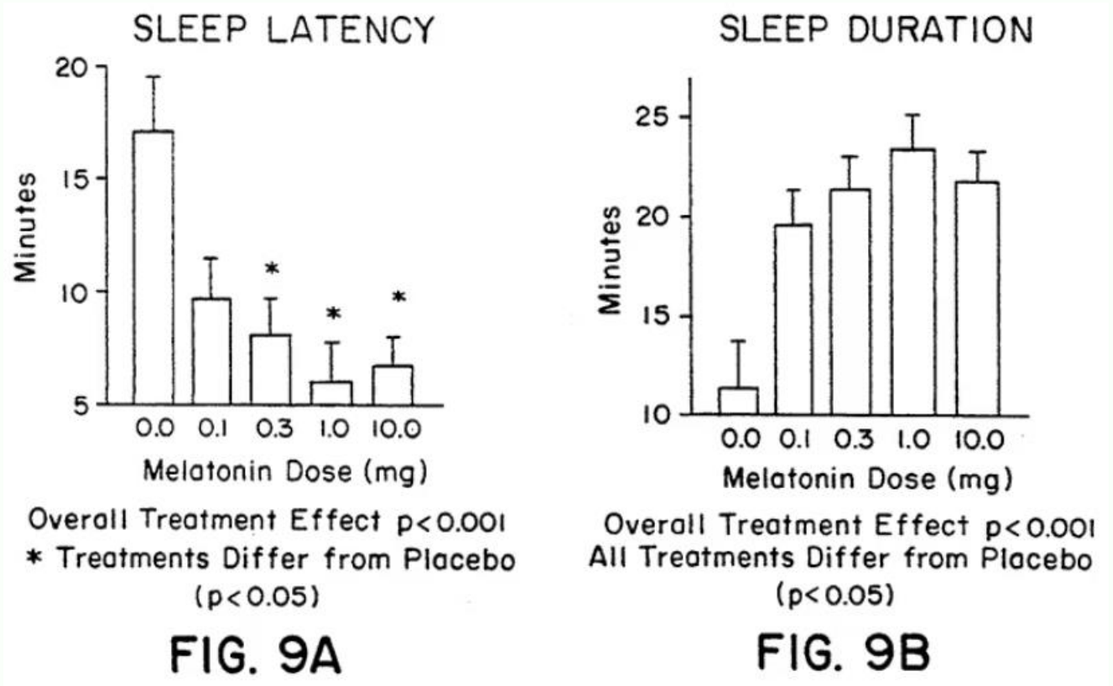
Psychopharmacological Interventions for Insomnia

Effective pharmacological treatment for insomnia needs to be "just right"

Psychopharmacology Matters! Melatonin as example:

The optimal melatonin dosage for an adult is 1 mg or less.

Taking a higher dose doesn't necessarily work better and in fact, may *increase* the amount of time it takes to fall asleep and *decrease* how long you stay asleep.



Use of Melatonin to Promote Sleep in Older People. (2008). Touchneurology.com. https://touchneurology.com/neurometabolic-disease/journal-articles/use-of-melatonin-to-promote-sleep-in-older-people/#article-abstract

Prescription Treatments for Insomnia – BP MEDS

- Blood Pressure Medications

- A2 Receptor Agonist - Clonidine (Catapres), Guanfacine (Tenex), Guanfacine ER (Intuniv)

- A1 Receptor Blocker - Prazosin (Minipress), Doxazosin (Cardura)

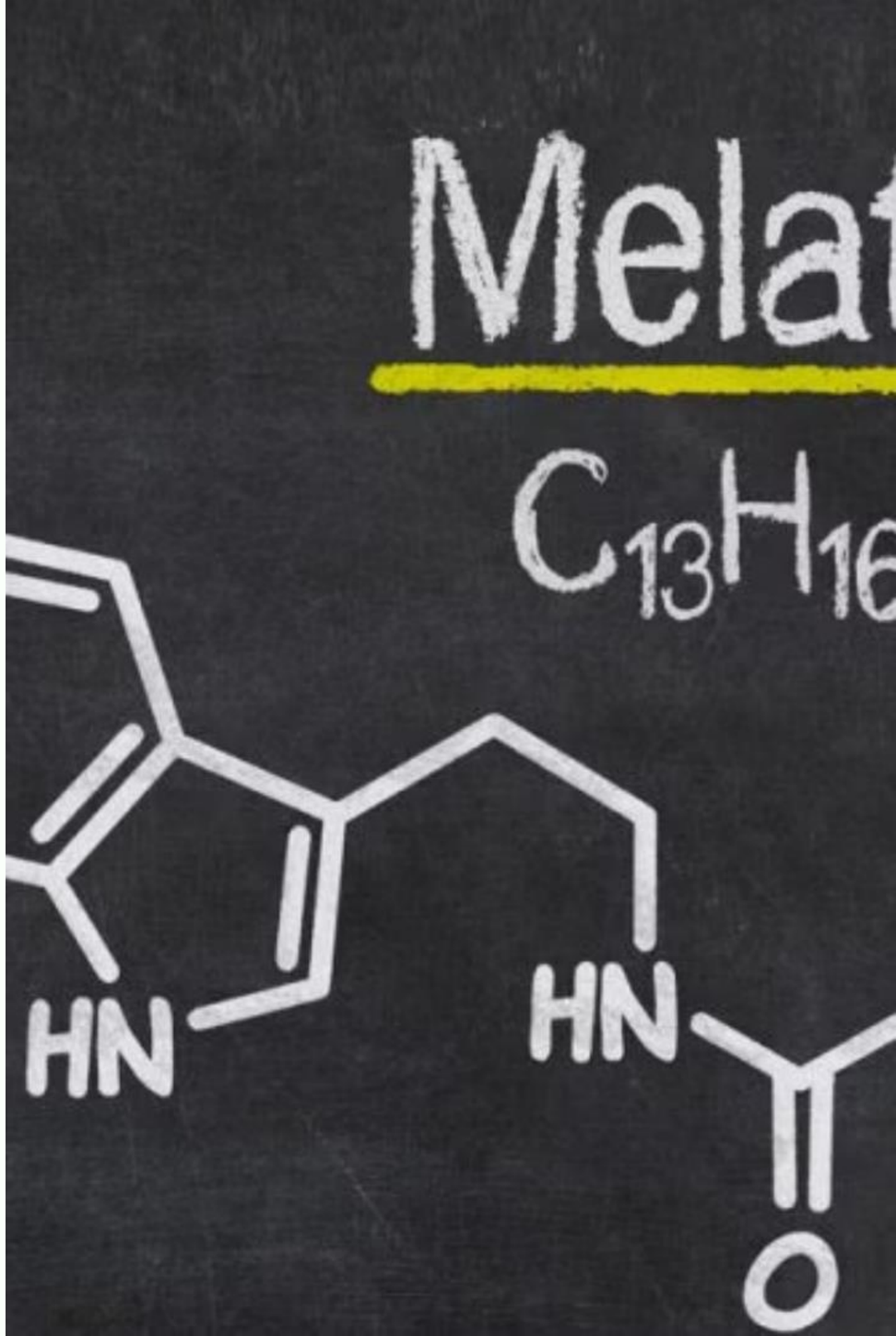
- Consider SE from other BP meds (Beta Blockers, ACE Inhibitors)

- Consider risk of dropping BP for patient in using this option, fall risk, education needed, consider concomitant sedation from other meds

Prescription Treatments for Insomnia – Melatonin Agonists

Melatonin Receptor Agonists (There are M1 and M2 Melatonin Receptors)

- Rozerem (Ramelteon) - generic, 8mg, easy to rx, low SE
- Tasimelteon (Hetlioz) - "Non-24"
- Melatonin OTC - (0.5mg or 1mg best, liquid best)
- Benefits of class: few SE, more natural approach

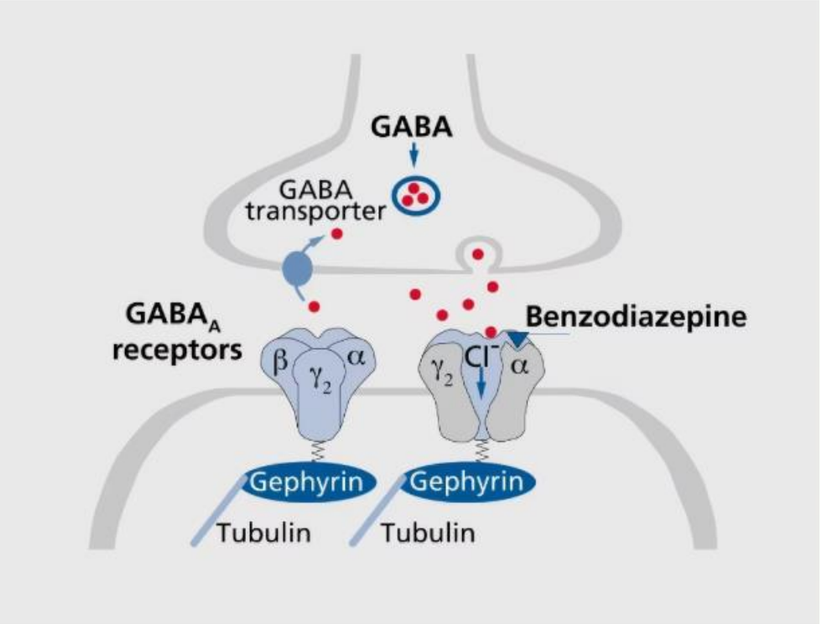


Prescription Treatments for Insomnia – Benzodiazepines

Benzodiazepine receptors are part of the GABA receptor complex (GABA = inhibitory system)

- Temazepam (Restoril) - Typically helps achieve 6-8 hrs
- Flurazepam (Dalmane) - Similar to Restoril, lasts longer
- Diazepam (Valium) - Muscle relaxation
- Lorazepam (Ativan) - Can be used sublingual = more rapid
- Clonazepam (Klonopin) - Can potentiate nightmare relief
- Alprazolam (Xanax) - Rapid onset, 4-6 hr duration
- Oxazepam (Serax) - Better for liver issues

Can be used for acute insomnia issues like post-partum depression; recommend against longer-term use; withdrawal symptoms deadly (seizure), respiratory depression w/ opioids



Prescription / OTC Treatments for Insomnia – Antihistamines

- Antihistamines are typically used to ease allergy symptoms, and work by blocking histamines' attachment to receptors, preventing the compounds from carrying out their functions.

- But older, first-generation antihistamines, including diphenhydramine and doxylamine succinate, don't discriminate between which histamine receptors they block. (Ex: Claritin = 2nd gen)
- They can cross the blood-brain barrier and inhibit one of the other functions of histamines – that is, the pivotal role they play in regulating sleep and wakefulness. This disruption of the action of histamines in the brain results in drowsiness.
- Diphenhydramine (Benadryl)
- Doxylamine (Unisom)
- Hydroxyzine Pamoate / HCl (Vistaril / Atarax)

Prescription Treatments for Insomnia – Hypnotics

Hypnotic medications bind to receptors in the brain that turn on the brain's "sleep" switch, are like slamming your car brakes before getting to a red light

1. ***Zolpidem (Ambien) – CR formulation, sublingual mist, sleepwalking***
2. ***Eszopiclone (Lunesta) – I've found it to be a bit safer than Ambien***
3. ***Zaleplon (Sonata) – Typically works for rapid onset, tolerance builds quick***

Withdrawal symptoms arise with rapid discontinuation, need to be weaned off

Prescription Treatments for Insomnia – Orexin Receptor Antagonist

Orexin Receptor Antagonist medications bind to receptors in the brain that target "wake promoting receptors" in brain, more similar to coasting to stop at a red light in car

- Suvorexant (Belsomra) - flexible dosing, might not work as quick as hypnotic
- Lemborexant (Dayvigo) - tablet (more flexibility)
- Daridorexant (Quviviq) - well tolerated in clinical experience, newest in class

Prescription Treatments for Insomnia – Antidepressants

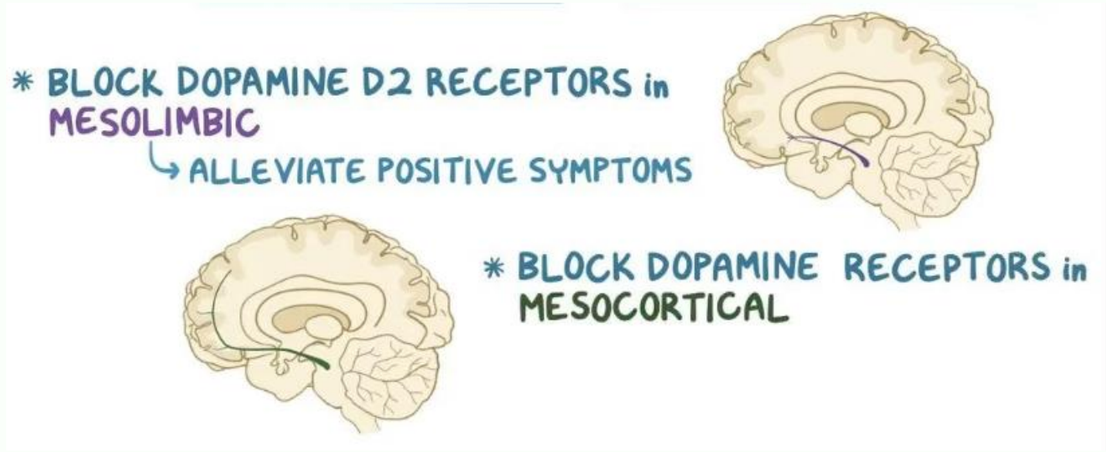
Can kill "2 birds with 1 stone" if you know what you're doing with these

- TCA Antidepressants:
  - Amitriptyline (Elavil) - Chronic pain, headache prophylaxis, sleep, anti-anxiety, depression relief all-in-one
  - Doxepin (Sinequan) - Liquid version, 3-6mg, lower = sometimes better
  - Imipramine (Tofranil) - Bedwetting
  - Anafranil (Clomipramine) - OCD

Prescription Treatments for Insomnia – Atypical Antidepressants

- Serotonin-2 Antagonist Reuptake Inhibitor (SARI)
  - Trazodone (Desaryl) - priapism, strange shape of pill, fairly reliable albeit high chance for "hangover"
- Mirtazapine (Remeron)
  - Lower doses typically work better than higher doses for sleep (medication becomes more norepinephrine heavy past 15-30mg); appetite increase; recommend 7.5mg dose ½ to 1 tablet 1 po QHS to start

Prescription Treatments for Insomnia – Typical Antipsychotics



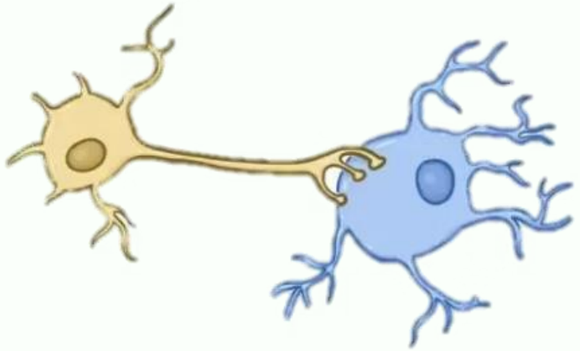
- We would typically use these to "kill two birds with one stone" for schizophrenia / schizoaffective / severe bipolar + insomnia
- Haldol (Haloperidol) - LAI available, reliable but SE
- Thorazine (Chlorpromazine) - Strongest in class
- Prolixin (Fluphenazine) - LAI available, reliable but SE

Anticipate metabolic issues, increased risk for parkinsonian movements (EPS / TD) with chronic use because we are blocking dopamine pathways

Prescription Treatments for Insomnia – Atypical Antipsychotics

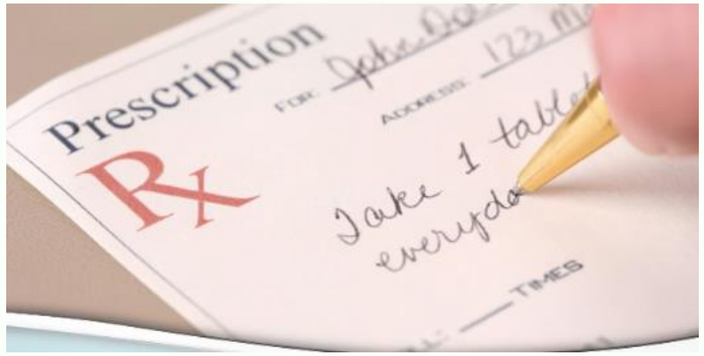
Less SE than Typical Antipsychotics although risk remains

- Quetiapine (Seroquel) - low doses (12.5 or 25mg) can be effective for difficult to treat insomnia, anticholinergic formulation typically leads to less development of EPS, indicated for depression, generalized anxiety, ER formulation available starting at 50mg
- Olanzapine (Zyprexa) - Typically works well for insomnia, can assist with depression, anxiety, wt. gain (Lybalvi new formulation), sublingual form
- Risperdone (Risperdal) - Fairly tried and true albeit SE, sublingual form



Prescription Treatments for Insomnia

Getting Creative



- Gabapentin (Neurontin) + Pregabalin (Lyrica) - neuropathic pain, restless leg syndrome, somnolence, migraine prophylaxis, alternative to benzo
- Anticonvulsants A.K.A. Mood stabilizers (Lithium, Lamictal, Depakote, Trileptal, Tegretol, etc) - Can be dosed at night at assist with somnolence, effective monotherapy or in conjunction to atypical antipsychotic if insomnia caused by bipolar
- Muscle Relaxers (Baclofen, Cyclobenzaprine, Methocarbamol, Tizanidine) - Can be used off-label to help induce somnolence and assist with TMJ / Bruxism at night
- Consider medications currently RX'd to patient that have potential to cause somnolence and back-load these medications if clinically indicated to bedtime dosing

Questions?