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Psychiatry and Addictions Case Conference

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WHEN SHOULD I USE SLEEP AIDS IN MY PATIENTS WITH SLEEP DISORDERS... (AND WHEN SHOULD I NOT?)

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GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

- ✓ I have no conflicts of interest or personal disclosures.

OBJECTIVES

1. Learn about different ways in which insomnia can manifest
2. Understand the pathophysiology of insomnia
3. Explore different ways to address and treat insomnia effectively

CASE EXAMPLE



James is a 53 year-old man with depression and hypertension, who comes to your clinic with a complaint of insomnia.

He tells you that he is able to get to sleep okay, but then can't stay asleep for more than a couple of hours. He then lies awake worrying. James started a new job recently that is very stressful. He has been eating more fast food and exercising less. He is very frustrated about his difficulty sleeping.

He asks you, **“Can you give me something for sleep?”**

INSOMNIA

- Insomnia is defined as a persistent difficulty with one or more of the following:
 - Sleep initiation
 - Sleep duration
 - Sleep consolidation
 - Sleep quality
- Results in some kind of daytime impairment
- Occurs despite adequate opportunity and circumstances for sleep



EPIDEMIOLOGY OF INSOMNIA

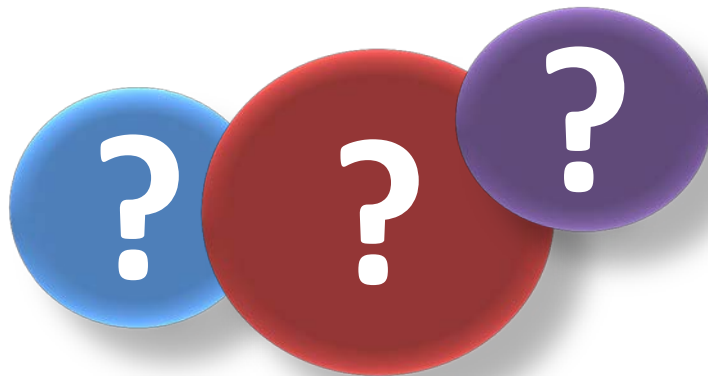
- About one third of adults have experienced transient insomnia symptoms
- When this occurs at least **three** times per week for at least **three** months, it is considered **chronic**
- **Chronic insomnia is the most commonly reported sleep problem** in industrialized countries, with a prevalence of 10-15%

DIAGNOSTIC CRITERIA

- Both the International Classification of Sleep Disorders (ICSD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) have updated their criteria for insomnia such that they no longer differentiate between “**primary**” and “**secondary**” insomnia
- No matter how insomnia comes about, it is considered a disorder in its own right

APPROACH TO DIAGNOSIS

- However...in order to treat insomnia effectively, you need to know what caused it
- **Taking a good history is critical for understanding why the patient is not sleeping well**



INSOMNIA HISTORY: TYPE

- Does the patient have difficulty with:
 - Initiating sleep
 - Maintaining sleep
 - Early morning awakenings
 - Poor quality/unrefreshing sleep
- Nearly half of those with insomnia have **two or more** of these symptoms

INSOMNIA HISTORY: TIMELINE

- How long has this problem been going on?
 - Months, years, lifetime?
 - What was going on in the patient's life when it started/worsened?
- How has it progressed (intermittent, progressive, persistent)?
- How often is it happening now?



INSOMNIA IS A 24-HOUR DISORDER

- Ask about the **sleep and wake** schedule:
 - Bedtime routine and bedtime
 - Time to fall asleep
 - Number, cause, and duration of awakenings
 - Wake time
 - Rising time
 - Do they nap?
 - When do they take medications, caffeine, and sleep aids?
 - Is the weekend schedule different?
 - What are they doing when they can't sleep?



<https://fitforwork.org/wp-content/uploads/2017/05/insomnia-blog.jpg>

INSOMNIA HISTORY: TREATMENT HISTORY

- What have they done to try to address the problem?
 - Over the counter medications
 - Prescription medications
 - Alcohol/drugs
 - Changes in routine to compensate: sleeping whenever they can, calling in sick to work

LET'S REVISIT THE CASE

- You ask your patient James these questions.
- He tells you that he usually goes to bed around 10pm, watches TV for a bit, and then goes to sleep without a problem. He wakes up 2-3 times/night for no apparent reason, goes to the bathroom, then lies awake in bed for up to an hour. He has racing thoughts and worries, and is very frustrated thinking about how tired he will be the next day. If he wakes up before his alarm time of 6am, he may just give up and get out of bed.
- He has a hard time napping, but feels tired and irritable during the day. He lets himself sleep in on weekends, and then has trouble falling asleep on Sunday night.
- **Are you done with your investigation?**

CAUSES OF INSOMNIA

- Insomnia is often attributed to **psychiatric conditions** – about 40% of all insomnia cases are associated with common psychiatric conditions, most commonly depression and anxiety
- But if your patient with insomnia has a known psychiatric problem, **don't stop there**
- **Insomnia can also be related to untreated sleep disorders, medical problems, medications, and substance use**

Wong SH, Ng BY. Review of sleep studies of patients with chronic insomnia at a sleep disorder unit. Singapore Med J. 2015 Jun; 56(6): 317–323.

INSOMNIA IS THE FINAL COMMON PATHWAY OF MANY CONDITIONS

Arthritis, asthma, autoimmune disorders, benign prostatic hypertrophy, COPD, dementia, hyperthyroidism, menopause, musculoskeletal pain, reflux, stroke, traumatic brain injury

Stimulants, beta blockers, bronchodilators, thyroid hormone, steroids, stimulating antidepressants, caffeine, alcohol, cocaine, methamphetamine

Insomnia

Sleep apnea
Delayed sleep phase disorder
Advanced sleep phase disorder
Restless legs syndrome

Depression
Anxiety
PTSD
Bipolar disorder
Schizophrenia

OBSTRUCTIVE SLEEP APNEA (OSA) AND INSOMNIA

- **STOP-BANG**

- S: Do you **snore**?
 - T: Are you often **tired/sleepy**?
 - O: Has anyone **observed** breathing pauses when you sleep?
 - P: Do you have elevated blood **pressure**?
 - B: **BMI** >35
 - A: **Age**>50
 - N: **Neck** circumference >40 cm
 - G: Male **gender**
- Patients with a STOP-Bang score of 0 to 2 can be classified as low risk for moderate to severe OSA whereas those with a score of 5 to 8 can be classified as high risk for moderate to severe OSA
 - OSA can cause fragmentation that leads to sleep onset or sleep maintenance insomnia

CIRCADIAN RHYTHM DISORDERS AND INSOMNIA

- **Delayed sleep phase syndrome:** characterized by insomnia at night, and hypersomnia in the morning (frequent in teenagers)
- **Advanced sleep phase syndrome:** characterized by early sleep onset and early morning awakenings (frequent in older patients)
- Circadian disorders are treated with chronotherapy, bright light therapy, and melatonin*



*Note: melatonin is not an FDA-approved or regulated medication!

LET'S RETURN TO YOUR PATIENT

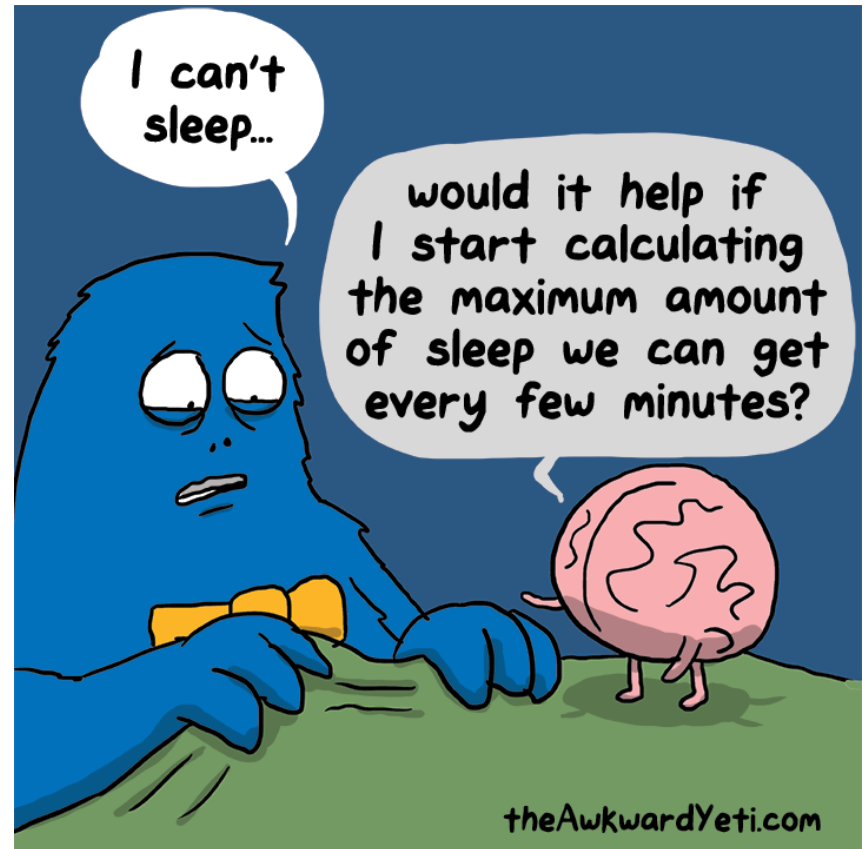
- When you ask him if he has been told he snores or has breathing pauses, he says, “My wife has threatened to divorce me because I snore so loudly. Sometimes she even sleeps in the guest room!”
- He has also gained some weight in the last few months, in the setting of his new eating and exercise habits.
- You quickly do the calculations. James snores, is tired, has hypertension, a BMI>35, age>50, and is male. You find that he has a neck circumference of 41 cm.
James' STOP-BANG score is 7/8.

NEXT STEPS

- You decide not to give him a sleep medication as he requested, and instead refer him for a sleep study.
- You learn a few weeks later that he has been diagnosed with moderate obstructive sleep apnea.
- He returns to your clinic, and says, “Well, they told me I have ‘sleep apnea’ and I have this machine now. But I still have problems staying asleep at night!”
- **Now what?**

PATHOPHYSIOLOGY OF INSOMNIA

- Insomnia can be caused by a number of pathways
- But it can then become its own entity, like a snowball rolling down a hill

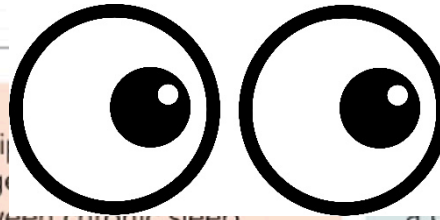


THE 3 P'S OF INSOMNIA

- **Predisposing** factors: light sleeper, anxious
- **Precipitating** factors: huge stressor, life change, new illness or medication causing **acute** insomnia
- **Perpetuating** factors:
 - Watching the clock
 - Worrying/ruminating
 - Stress/frustration in the bedroom environment
 - Reliance on sleep aids, eye pillows, earplugs
 - Fear of impairment and health consequences

“WHAT HAPPENS IF I CAN’T SLEEP?”

Lose Sleep, Lose Your Mind And Health



Alzheimer's

Many studies have linked lack of sleep to both colorectal and aggressive breast cancers.

Multiple studies suggest a link between chronic sleep deprivation and increased obesity risk.

Research has linked short-term sleep deprivation with a propensity to load up on bigger portions, a preference for high-calorie, high-carb foods and a greater likelihood of choosing less healthy foods while grocery shopping.

Heart ATTACKS



OBESITY



CANCER



INSOMNIA AND HYPERAROUSAL

- Chronic insomnia is a state of **hyperarousal**:
 - Difficulty sleeping **day or night**
 - Increased metabolic rate
 - Increased wake and sleep brain glucose consumption
 - Elevated cortisol level
 - Increased blood pressure
 - Increased high-frequency EEG activity during sleep

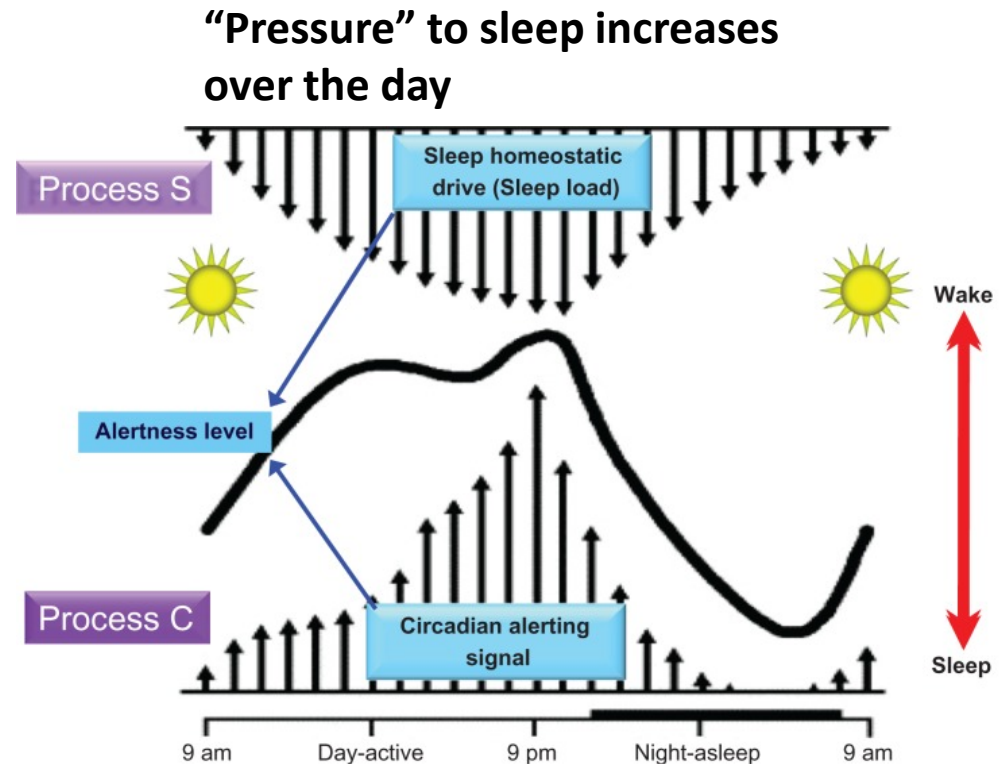
HOW TO REVERSE INSOMNIA?

- Track the sleep pattern
(<http://yoursleep.aasmnet.org/pdf/sleepdiary.pdf>)
- Identify factors that contribute to hyperarousal (emotional, cognitive, physiological)
- De-escalate arousal by calming the body and mind
- Reshape the sleep schedule, using the body's natural desire to sleep

OPTIMIZING SLEEP TIMING AND ENVIRONMENT

Sleep “hygiene:

- Keep the same bedtime and waking time every day
- Avoid naps
- Limit caffeine and alcohol
- Exercise early in the day, not at night
- Follow a bedtime “wind-down” routine
- Keep the bedroom dark, quiet, and cool
- Avoid nighttime exposure to light and stimulating activities
- Remove the clock from sight



The circadian clock is entrained by light, activity, and feeding

THE GOLD STANDARD

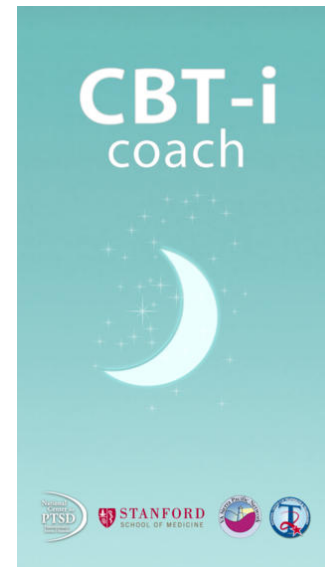
- Unfortunately, sleep hygiene *alone* usually only has a weak effect on chronic insomnia
- **Cognitive-behavioral therapy for insomnia (CBT-I)** is the first-line treatment for chronic insomnia
 - Targets the emotions, attitudes, and behaviors that perpetuate insomnia
 - Shows robust efficacy for treating chronic insomnia
 - Can be individual or group treatment
 - Usually 6-10 sessions

COMPUTERIZED CBT-I

- Brief interventions and online programs/apps have shown efficacy



SHUT *i*™
Sleep Healthy Using the Internet



SO YOUR PATIENT JUST WANTS A PILL?

- About 20% of American adults use a medication in a given month, with ~60% using over-the-counter sleep aids
- Sleep aids can treat the symptoms of insomnia, but do not treat the cause
- The most commonly used sleep aids are not well-studied or FDA-approved for insomnia!

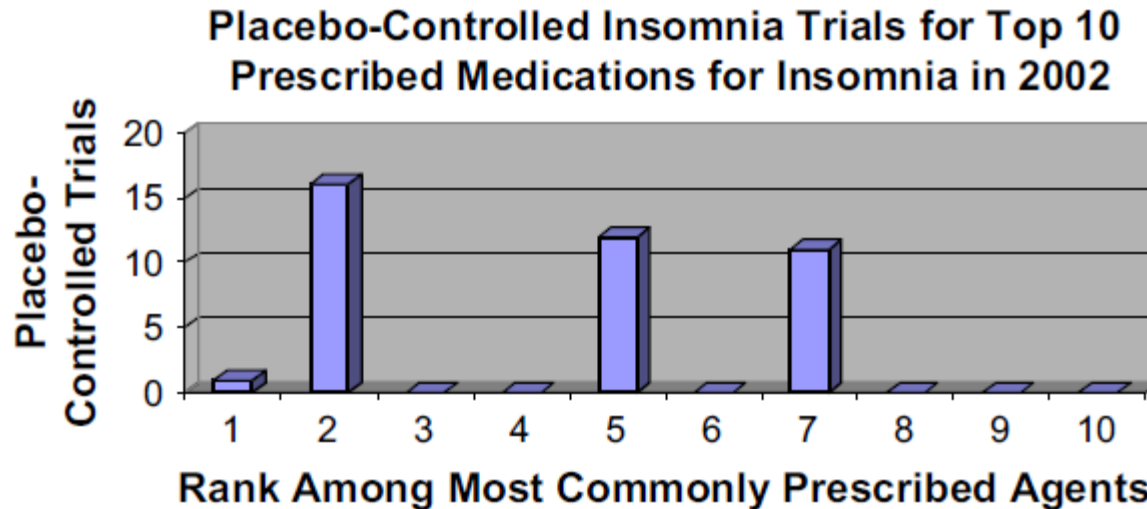


Fig. 1. Agent rank: 1: trazodone, 2: zolpidem, 3: amitriptyline, 4: mirtazapine, 5: temazepam, 6: quetiapine, 7: zaleplon, 8: clonazepam, 9: hydroxyzine, 10: alprazolam.

2017 CLINICAL PRACTICE GUIDELINE FOR THE PHARMACOLOGIC TREATMENT OF CHRONIC INSOMNIA IN ADULTS: AN AMERICAN ACADEMY OF SLEEP MEDICINE CLINICAL PRACTICE GUIDELINE

- We suggest that clinicians use suvorexant as a treatment for sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use eszopiclone as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use zaleplon as a treatment for sleep onset insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use zolpidem as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use triazolam as a treatment for sleep onset insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use temazepam as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use ramelteon as a treatment for sleep onset insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians use doxepin as a treatment for sleep maintenance insomnia (versus no treatment) in adults. (WEAK)

2017 CLINICAL PRACTICE GUIDELINE FOR THE PHARMACOLOGIC TREATMENT OF CHRONIC INSOMNIA IN ADULTS: AN AMERICAN ACADEMY OF SLEEP MEDICINE CLINICAL PRACTICE GUIDELINE

- We suggest that clinicians **not** use trazodone as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians **not** use tiagabine as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians **not** use diphenhydramine as a treatment for sleep onset and sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians **not** use melatonin as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians **not** use tryptophan as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults. (WEAK)
- We suggest that clinicians **not** use valerian as a treatment for sleep onset or sleep maintenance insomnia (versus no treatment) in adults. (WEAK)

PRESCRIPTION SLEEP AIDS

- If you feel a short-term sleep aid is the best option:
 - Establish **treatment goals** with the patient
 - Choose a medication with an appropriate **duration of action** for the problem you are targeting
 - Be aware of **adverse effects**, including next-day grogginess and fall risk
 - Keep **comorbid conditions, medication interactions, and history of substance abuse** in mind
 - Counsel the patient that this is for **symptom management** and may not address the underlying problem
 - Be VERY cautious giving sleep aids to **older adults**
- Long-term prescribing should be accompanied by consistent follow-up, monitoring for adverse effects, and evaluation of comorbid disorders



QUESTIONS?

Feel free to contact me:
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