I can’t sleep- now what?!
• I have no conflict of interest
DEFINITION¹

• Persistent sleep difficulty

• Adequate sleep opportunity

• Daytime functional impairment
CLASSIFICATION

- Chronic Insomnia Disorder (CID)
- Short Term Insomnia Disorder (STID)
- Other Insomnia Disorder (OID)
EPIDEMIOLOGY

• Prevalence:
  
  • CID – 10%
  • STID – 15-20%
  • Higher in women, older adults, medical/psych/substance abuse and lower socio-economic status.
Chronic Insomnia Disorder

- At least 3 days a week for at least 3 months
- Symptoms:
  - Difficulty falling asleep
  - Difficulty staying asleep
  - Waking up earlier than desired
  - Resistance to scheduled bed time (children)
  - Difficulty sleeping w/o parent intervention
Chronic Insomnia Disorder

• Symptoms
  – Daytime fatigue
  – Mood disturbance
  – Attention and focus problems
  – Daytime sleepiness
  – Behavioral problems such as hyperactivity
  – Decreased vigilance
  – Worrying about sleep
Chronic Insomnia Disorder

• Normal sleep onset latency
  – Children/young adults $\leq 20$ minutes
  – Middle age/older $\leq 30$ minutes
Chronic Insomnia Disorder

- Subtypes\(^2\)
- 1. Psychophysiological insomnia: Heightened arousal and learned sleep-preventing associations.
- 2. Idiopathic insomnia: Genetically determined or congenital aberrations in sleep/arousal systems
Chronic Insomnia Disorder

- 3. Paradoxic insomnia: Patient perceives insomnia w/o objective evidence
- 4. Inadequate sleep hygiene: Poor sleep habits/routine
- 5. Behavioral insomnia of childhood
Chronic Insomnia Disorder

• 6. Insomnia due to a mental disorder

• 7. Insomnia due to a medical condition

• 8. Insomnia due to drug or substance
Chronic Insomnia Disorder

• 9. Adjustment Insomnia: Identifiable stressor with symptoms lasting < 3 months
Chronic Insomnia Disorder

- **Predisposing Factors**
  1. Difficulty sleeping during stressful times
  2. Habitual light sleepers

- **Precipitating/Perpetuating Factors**
  1. Professional or personal (death, divorce, financial) stress
  2. Personality factors such as high anxiety
Chronic Insomnia Disorder

- **Course:**
- Onset may be acute or insidious
- May be situational, recurrent or persistent
- 70% report insomnia 1 year later and 50% 3 years later
Chronic Insomnia Disorder

• Pathophysiology¹:

• Heightened sympathetic nervous system activity and hypothalamic-pituitary-adrenal axis

• Elevated cortisol, ACTH, increased heart rate, increased metabolic rate,

• No discrete brain lesions
Short Term Insomnia Disorder

• Less than 3 months
• Symptoms:
  – Difficulty falling asleep
  – Difficulty staying asleep
  – Waking up earlier than desired
  – Resistance to scheduled bed time (children)
  – Difficulty sleeping w/o parent intervention
Short Term Insomnia Disorder

• Symptoms
  – Daytime fatigue
  – Mood disturbance
  – Attention and focus problems
  – Daytime sleepiness
  – Behavioral problems such as hyperactivity
  – Decreased vigilance
  – Worrying about sleep
Differential Diagnosis

- Circadian rhythm sleep disorders
- Insufficient sleep syndrome
- Co morbid sleep disorders, medical/psych disorders
Other Insomnia Disorder

• The complaints do not meet the Full Criteria for either CID or STID

• This diagnosis is rarely used due to its non-specific nature
Testing

• If a sleep disorder such as sleep apnea or PLMS is suspected as the cause, consider polysomnogram

• Consider actigraphy monitoring to study sleep cycle and routine
Actigraphy
Management

• Goals

• A. Improve sleep quality/quantity

• B. Improve daytime impairment
Management

• Approaches

• A. Psychologic & Behavioral

• B. Pharmacologic
Cognitive & Behavioral Therapy components

- Stimulus control (S)
- Relaxation training (S)
- Cognitive behavioral therapy for insomnia—CBT-I (S)
- Multicomponent therapy (without cognitive therapy; G)
- Sleep restriction (G)
- Paradoxic intention (G)
- Biofeedback therapy (G)
- Sleep hygiene therapy (N)
CBT-I

- **Stimulus control**: Decrease arousing mental states such as worries
- **Relaxation training**: Muscle relaxation, abdominal breathing, guided imagery
- **Cognitive Therapy**: Addressing distorted beliefs & maladaptive behaviors to sleep
- **Multicomponent therapy**: Behavioral components and sleep hygiene
CBT-I

- Sleep Restriction- Decreasing time in bed
- Paradoxic Intention- Patient asked to stay awake
- Biofeedback- Decreasing somatic arousal
- Sleep Hygiene
Pharmacologic Treatment

• Over the counter - Melatonin, antihistamines, valerian

• Prescription
  • 1 Benzodiazepine receptor agonist (BZRA)
  • 2 Melatonin (MT) receptor agonist
  • 3 Selective antihistamine
  • 4 Orexin/hypocretin antagonist
BZRA

• Target is GABA\textsubscript{A} receptor complex
• Beneficial for sleep onset but sleep maintenance depends on half life
• Benzodiazepines: Clonazepam, Lorazepam, Triazolam
• Non-Benzodiazepines: zolpidem, zaleplon, eszopiclone
Melatonin Receptor Agonist

- Acts on $\text{MT}_1$ and $\text{MT}_2$ receptors
- Beneficial for sleep onset
- Name- Ramelteon
Selective antihistamine

- Central antihistamine receptors ($H_1$)
- Doxepin in low dose
Orexin/Hypocretin antagonists

- Target is Hypocretin receptors A and B
- Example is Suvorexant
- Watch for REM phenomena such as sleep paralysis intruding into wakefulness
References

