Insomnia occurs frequently in HIV-infected patients and during all stages of HIV disease. Although insomnia is not unique to the HIV-infected population, insomnia screening should be part of routine HIV care due to the potentially negative effects of insomnia on health, including HIV disease progression.

What Is Insomnia?
- Difficulty falling asleep
- Frequent awakenings during sleep
- Early morning awakening, or
- Non-restorative sleep despite adequate sleep duration

Possible Causes of Insomnia
- Major life events, such as the death of a loved one
- Changes in sleeping environment (e.g., when in the hospital)
- Physical and mental health disorders
- Prescription or OTC medication use
- Use or relapse of use of alcohol or other substances

Possible Consequences of Insomnia
- Fatigue, irritability, elevated blood pressure, excessive daytime sleepiness
- Non-adherence to ART
- Increase in pain symptoms and worsening of physical health conditions
- Relapse of psychiatric symptoms (e.g., anxiety, depression, mania)

Assessment of Sleep Patterns
Suggest the patient keep a sleep log, which could include:
- Events prior to bedtime, including emotional stressors and the consumption of alcohol or caffeine-containing beverages
- Bedtime
- Time spent awake in bed before falling asleep
- Number, time, and length of awakenings
- Final time of morning awakening
- Time spent awake in bed before arising
- Frequency and duration of naps during the day
- Patient or bed partner observations of snoring, interrupted breathing, abnormal leg movements

Differential Diagnosis: Substance Use Etiologies
- Caffeine
- Nicotine
- Alcohol
- Illicit drug use, particularly stimulant drugs

Differential Diagnosis: Medical Conditions
- Pain
- Respiratory: dyspnea and sleep apnea
- Gastrointestinal: gastroesophageal reflux
- Endocrinologic: hypothyroidism, menopause
- Neurologic: cognitive impairment, neuroathy, periodic limb movements in sleep or restless limb syndrome
- Cardiopulmonary: lung disease, congestive heart failure
- Nephrologic/urologic: chronic kidney disease, frequent urination and incontinence

Differential Diagnosis: Medications
- ART medications (e.g., efavirenz, lamivudine)
- ß-Blockers
- Bronchodilators
- Calcium channel blockers
- Corticosteroids
- Decongestants
- Immunosuppressants (e.g., interferons, interleukin-2)
- Trimethoprim-sulfa
- Dapsone
- Amphotericin
- Fluconazole
- Isoniazid
- Diuretics taken at bedtime

FOR MORE INFORMATION, PLEASE VISIT WWW.HIVGUIDELINES.ORG
DO
✓ Take warm baths before bed
✓ Exercise for at least 30 min/day most days of the week
✓ Maintain a bedtime routine (e.g., going to bed and waking up at a set time)
✓ Make bedroom cool, dark, and quiet
✓ Place the clock out of sight
✓ If unable to fall asleep after 4 minutes, leave bed and do something relaxing (e.g., reading), return to bed later

DON’T
✓ Don’t consume caffeine (coffee, tea, chocolate, soda), alcohol, or nicotine before bedtime
✓ Don’t eat a large meal just before bedtime
✓ Don’t nap during the day
✓ Don’t exercise within 2 hours of bedtime
✓ Don’t work, eat, read, or watch television in bed

CHECKLIST OF QUESTIONS WHEN SELECTING A PHARMACOLOGIC AGENT FOR INSOMNIA:

Will this agent improve symptoms that may be contributing to the patient’s insomnia (e.g., depression, anxiety, neuropathic pain, etc.)?
Will this agent pose risks to the patient based on comorbid medical conditions?
Will this agent pose risks based on interactions with other medications, (e.g., zolpidem, zaleplon, and eszopiclone should be used with caution in patients taking protease inhibitors)?
Is this the optimal agent for a patient with a current or past history of alcohol or sedative abuse/dependence?
Can the patient afford the prescribed medication?

COGNITIVE BEHAVIORAL STRATEGIES

✓ Referral to a sleep specialist to assist patients with cognitive-behavioral techniques may benefit some individuals with insomnia. Techniques include: cognitive therapy, relaxation training, sleep restriction, and phototherapy.

PHARMACOLOGIC APPROACH TO INSOMNIA

✓ Assess for patient use of OTC agents for insomnia and offer to prescribe an FDA-approved agent as a better option (e.g., offer ramelteon instead of OTC melatonin)
✓ Avoid prescribing medications for sleep disturbance that have narrow therapeutic ranges and potential for abuse (e.g., barbiturates, choral hydrate, and meprobamate)
✓ Limit to 1 week the use of antihistamines for promoting sleep in order to avoid worsening of symptoms due to long-term use
✓ Advise patients of the potential side effects of melatonin agonist therapy, including OTC preparations, particularly severe hypersensitivity reactions
✓ Do not prescribe tricyclic antidepressants to patients with cardiac conduction problems; although some clinicians prescribe these agents for insomnia, most are not FDA-approved for this purpose

AGENTS WITH AN FDA-APPROVED INDICATION FOR INSOMNIA

✓ Antihistamines
  - Diphenhydramine
  - Doxylamine
  - Hydroxyzine

✓ Non-benzodiazepine hypnotics:
  - Zolpidem
  - Zolpidem-CR
  - Zaleplon
  - Eszopiclone

✓ Melatonin Agonist
  - Ramelteon

✓ Antidepressants
  - Trazodone
  - Doxepin

✓ Benzodiazepine hypnotics
  - Flurazepam
  - Quazepam
  - Estazolam
  - Triazolam
  - Temazepam
  - Lorazepam

REFERENCES