Management of Insomnia in the Primary Care Setting

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LEARNING OBJECTIVES

- Identify clinical recommendations for the management of chronic insomnia
- Be able to explain the benefits of CBT-I for the treatment of insomnia
- Distinguish the differences in relative risks, benefits and indications for sedative hypnotic medications
INSOMNIA: Why is it a problem?

- Cognitive Impairment
- Fatigue
- Irritability
- Increased psychiatric risks
- Higher risk of drug & alcohol problems
- Reduced work performance
- Increased health risks
- Magnifies stress
- Higher rate of accidents
- Impairments in immunity
- Decreased quality of life
We Sleep to **Heal** (Repair & Restoration)

We Sleep to **Rest** (Energy Conservation)

We Sleep to **Learn** (Information Consolidation)

**SLEEP: Current Major Theories**
SLEEP: Benefits

- Critical for memory recall
- Enhances creativity
- Improves judgment
- Decreases impulsivity
- Improves attention
- Supports weight loss
- Reduces stress levels
- About 25% of adults are dissatisfied with their sleep
- 10-15% of adults report daytime consequences of insomnia
- 6-10% of adults meet criteria for an insomnia disorder
- Insomnia is one of the most prevalent complaints in primary care
- Complaints increase with age
- Complaints are 2x as prevalent in women
  - Especially in 3rd trimester and after menopause
- Up to 65% of the Elderly complain of insomnia

INSOMNIA: Prevalence
The ICSD-3 is the most advanced classification of sleep disorders
Produced by the American Academy of Sleep Medicine
Includes six main clinical divisions + a supplementary category:

I. Insomnia
II. Sleep-related breathing disorders
III. Central disorders of hypersomnolence
IV. Circadian rhythm sleep-wake disorders
V. Parasomnias
VI. Sleep-related movement disorders
VII. Other sleep disorders

2 APPENDICES
Appendix A Diagnoses that can be classified as medical or neurologic disorders
Appendix B Guide to ICD-10-CM coding for substance-induced sleep disorders.
Diagnostic criteria for chronic insomnia - **Criteria A–F must be met**

**A.** The patient reports, or the patient’s parent or caregiver observes, one or more of the following:

1. Difficulty initiating sleep
2. Difficulty maintaining sleep
3. Waking up earlier than desired
4. Resistance to going to bed on appropriate schedule
5. Difficulty sleeping without parent or caregiver intervention

**B.** The patient/parent/caregiver reports/observes, one or more of the following related to the nighttime sleep difficulty:

1. Fatigue/malaise
2. Attention, concentration or memory impairment
3. Impaired social, family, occupational or academic performance
4. Mood disturbance/irritability
5. Daytime sleepiness
6. Behavioral problems (e.g. hyperactivity, impulsivity, aggression)
7. Reduced motivation/energy/initiative
8. Proneness for errors/accidents
9. Concerns about or dissatisfaction with sleep

**C.** The reported sleep/wake complaints cannot be explained purely by inadequate opportunity (i.e. enough time is allotted for sleep) or inadequate circumstances (i.e. the environment is safe, dark, quiet and comfortable) for sleep.

**D.** The sleep disturbance and associated daytime symptoms occur **at least three times per week**

**E.** The sleep disturbance and associated daytime symptoms have been present for **at least 3 months**

**F.** The sleep/wake difficulty is not explained more clearly by another sleep disorder
INSOMNIA: Classification DSM-V

- Complaint of sleep **quantity** or **quality** associated with problems falling asleep, staying asleep, and/or early morning awakenings
- The sleep problem causes distress and/or some sort of problem at work, with others, etc.
- The sleep problem occurs at least 3 nights/week and has been going on for at least 3 months
- The sleep problem occurs despite adequate opportunity for sleep
- The insomnia is not better explained by another sleep disorder, is not caused by the effects of a substance, and is not adequately explained by coexisting mental disorders or medical conditions

**NOTE:**
- Distinction into primary and secondary insomnia has been removed
- There is increased specificity regarding FREQUENCY
- DURATION has been changed to 3 months
- 2 diagnoses removed: Sleep Disorder related to another mental health disorder or medical condition
- DSM-V and ICSD-3 now similar due to collaborative efforts toward uniformity and consistency
F51.01 Primary insomnia  
F51.02 Adjustment insomnia  
F51.03 Paradoxical insomnia  
F51.04 Psychophysiologic insomnia  
F51.05 Insomnia due to other mental disorder  
F51.09 Other insomnia not due to a substance/known physiological condition  

G47.00 Insomnia, unspecified  
G47.01 Insomnia due to medical condition  
G47.09 Other insomnia  

Z72.820 Sleep Deprivation  
Z73.810 Behavioral insomnia of childhood, sleep-onset association type  
Z73.811 Behavioral insomnia of childhood, limit setting type  
Z73.812 Behavioral insomnia of childhood, combined type  
Z73.819 Behavioral insomnia of childhood, unspecified type

**INSOMNIA: ICD-10-CM CODES**
<table>
<thead>
<tr>
<th>INTERNATIONAL CLASSIFICATION OF SLEEP DISORDERS</th>
<th>DIAGNOSTIC &amp; STATISTICAL MANUAL OF MENTAL DISORDERS</th>
<th>INTERNATIONAL CLASSIFICATION OF DISEASES</th>
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<tr>
<td>ICSD-3</td>
<td>DSM-V</td>
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<td>Sleep Disorders</td>
<td>Mental Disorders</td>
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<tr>
<td>Diagnostic Criteria</td>
<td>Diagnostic Criteria and Codes</td>
<td>Medical Classification Codes</td>
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<tr>
<td>Produced by the American Academy of Sleep Medicine</td>
<td>Produced by the American Psychiatric Association</td>
<td>Produced by World Health Organization</td>
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<td>Predominantly used by US and International clinicians</td>
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<td>Predominantly used by international clinicians</td>
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**DSM vs ICD**

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INSOMNIA: Underlying Etiology

- Deficits in homeostatic drive
- Neurobiological
  - Problems with arousal systems activation
  - Abnormal input
  - Circadian rhythm dysregulation
  - Abnormal sensory processing
- Genetic vulnerability
- Psychological and Behavioral Processes
- Medication side effects
- Medical disorders
- Multifactorial
ACUTE INSOMNIA: Common Causes

- A change of sleeping environment
- Dietary (caffeinated beverages, chocolate, MSG, alcohol)
- Jet lag
- Shift Work
- Uncomfortable room temperature
- Stress
- Acute medical or surgical illnesses

Medications
- stimulant medications
- theophylline
- beta-blockers
- corticosteroids
- thyroxine
- bronchodilators
- antidepressants
INSOMNIA: Assessment

- General information
- Chief Complaint
- History of Present Illness
- Review of Symptoms
- Current Stressors
- Medications (OTC, RX, herbals, nutraceuticals)
- Allergies
- Sleep Hx
- Medical Hx
- Psychiatric Hx
- Family History
- Social History
- Physical Exam
- Labs
- Assessment – BioPsychoSocial
- DDx
- Treatment Recommendations and Plan
WHAT IS THE NATURE OF THE COMPLAINT?
- Do you have problems falling asleep or staying asleep?
- How long have you been having problems with sleep?
- Do you frequently awaken, and is that associated with anything (pain, worry, noise)?
- Do you awaken tired or unrefreshed despite many hours of sleep?
- How concerned are you about the sleep problems you are experiencing?
- What have you tried to help you with your sleep problems?

ELUCIDATE SLEEP HABITS & BEHAVIORS
- What time do you go to bed and get up?
- Can you describe a typical day for me from the time you wake up until you fall asleep?
- Have there been any recent changes in your routine or health?
- When going to sleep, do you find yourself worrying about things excessively?
- What are situations which normally impact your sleep?
- Are you experiencing any stressful situations at this time?
ASSESSMENT OF INSOMNIA: S/SX

Symptoms
- Difficulty falling asleep
- Number and duration of nocturnal awakenings
- Early morning awakening
- Non-restorative sleep

Onset
- Gradual or abrupt
- Circumstances (changes in health, stressors, drugs)

Duration
- Days, weeks, months, years

Severity
- Frequency, intensity, effect on daytime functioning

Course
- Acute, episodic, persistent
- Precipitants and perpetuating factors (stress, pain, illness)
- Previous treatments and response

Adapted from Schutte-Rodin (2008)
ASSESSMENT OF INSOMNIA: Review of Systems

Environment:
- Bedroom (light, electronics, comfort)
- Psychological state before bedtime (worries about sleep, thoughts and emotions)

Sleep-wake schedule:
- Bedtime and time needed to fall asleep
- Wake-up time and time out of bed
- Regularity of schedule (weekdays and weekends)
- Behaviors during nocturnal arousals (use of toilet, eating or drinking)

Daytime function
- Sleepiness versus fatigue
- Cognitive functions; mood disturbances
- Daytime activities including exercise; regularity of schedule

Drug and substance use
- Over-the-counter agents
- Prescription drugs
- Recreational drugs including alcohol, tobacco, and caffeine

Other sleep-related symptoms
- Respiratory (snoring, witnessed apneas, waking gasping for breath)
- Motor (restless legs, kicking/twitching during sleep, sleepwalking)
- Other medical (pain, reflux, urinary frequency)

Adapted from Schutte-Rodin (2008)
Insomnia screening instruments
- Sleep Condition Indicator (DSM-V based)
- Pittsburgh Sleep Quality Index (targets sleep disorders, mood disorders)
- Insomnia Severity Index (insomnia)
- Epworth Sleepiness Scale (excessive daytime sleepiness)
- Stanford Sleepiness Scale (assesses alertness)
- STOP-BANG (suspicion for OSA)

Sleep Logs or diaries (2 weeks minimum of data)
- National Sleep Foundation Sleep Diary

Stress, Mood & Behavior
- PHQ-9 Patient Depression Questionnaire
- PHQ-15 Somatic Symptom Severity Scale
- AUDIT Alcohol Use Disorders Identification Test
INSOMNIA DISORDER WITH COMORBIDITY

- Shift away from “primary insomnia” and “secondary insomnia” terminology (hard to know which came first)
- Treat comorbid insomnia early and not wait for it to resolve with treatment of the other condition
- Sleep-related breathing disorders
  - Obstructive / central sleep apnea syndrome
- Sleep-related movement disorders
  - Restless leg syndrome, periodic limb movement disorder, nocturnal leg cramps
- Circadian rhythm sleep-wake disorders
  - Jet lag or shift work
  - Delayed or advanced sleep-phase syndromes
    - Delayed sleep phase: difficulty falling asleep until several hours after desired bedtime, with difficulty waking up on time for school or work. Common in young adults.
    - Advanced sleep phase: difficulty staying up until desired bedtime, accompanied by early morning awakening. More common in elderly people.
    - Shift work sleep disorder: difficulty sleeping at scheduled time and difficulty maintaining alertness while working. Usually seen with night shift or rotating shift work.
- Parasomnias related to non-rapid eye movement
- Psychiatric disorders
  - Insomnia is often associated with anxiety and mood disorders but can be present with any psychiatric disorder.
  - Insomnia usually worsens when psychiatric disorder is more symptomatic.
  - All patients with chronic insomnia should be screened for psychiatric disorders.
Identify signs and symptoms of specific disorder contributing to sleep disruption

- Vital signs
- Weight
- Structural sleep apnea (neck, palate, tongue, tonsils, weight)
- Stigmata of substance abuse
- Endocrine (thyroid dysfunction,
- Cardiopulmonary (cough, wheeze,
- Neurologic (Dementia, TBI,
- Renal (metabolic derangements)
- ObPain
- Psych

PHYSICAL EXAM
- Elevated heart rate
- Elevated sympathetic and decreased parasympathetic tone
- Hormonal (reflects abnormal hypothalamic–pituitary–adrenal axis)
  - Increased 24-hour cortisol levels
  - Increased evening cortisol levels and
    - Increased 24-hour corticotropin levels
- Increased brain glucose metabolism
- Increased EMG activity, as noted in the frontalis muscle
- EEG spectral analysis showing increased beta activity
- Melatonin Levels
  - Decreased nocturnal melatonin levels
  - Increased diurnal melatonin levels
- Increased latencies on MSLT, despite disturbed nocturnal sleep
- Neuroimaging findings of subcortical (ARAS) hyperarousal

INSOMNIA: Pathophysiology
SLEEP STUDY: Indications

1. Suspicion for underlying sleep disorder
2. Suspicion for concomitant disease

Possible tests
- Polysomnography
- Multiple Sleep Latency Test
- Sleep Actigraphy
- Tests for disorders contributing to insomnia
- Urine drug screening (to check for substance use)
INSOMNIA: Practice Parameters
INSOMNIA: Treatment Recommendations

**ONLY 2 TREATMENT MODALITIES HAVE ADEQUATE EVIDENCE TO SUPPORT THEIR USE IN THE MANAGEMENT OF CHRONIC INSOMNIA:**

1. CBT-I
2. Benzodiazepine Receptor Agonists (BDZ-RAs, aka “Z-drugs”)

If CBT is unsuccessful, pharmacologic therapy may be warranted
- Combination therapy: CBT-I + short-term medication
- Benzodiazepine Receptor Agonists preferred
- Avoid benzodiazepines
- Nonprescription treatments (low-dose antihistamines)
- Antidepressants only if underlying depression present
- Melatonin Receptor Agonists for sleep cycle shift
- Suvorexant improved treatment response
- Other medication classes lack evidence of effectiveness
- Limit continuous use of sedative-hypnotics to 1 month
- Longer use or intermittent use may be appropriate in select situations with close monitoring
Cognitive Behavioral Therapy for Insomnia

- **FIRST LINE TREATMENT FOR CHRONIC INSOMNIA**
- Effective in comorbid insomnia
- Multicomponent strategy using cognitive & behavioral techniques
- Reinforces patient’s biological sleep processes
- Can be offered in individual or group sessions
- Can be delivered by primary care providers
- Longitudinal studies show benefits for up to 2 years and longer
- CBT-I is more than sleep hygiene
- Sleep hygiene alone is not supported by the evidence

**CBT-I**
Components of CBT-I

- Sleep Hygiene
- Sleep restriction
- Stimulus control therapy
- Relaxation techniques
- Cognitive Behavioral Therapy
- Maintain constant bed times and rising times
- Allow adequate time for sleep (7 h to 8 h for adults)
- Do not force sleep
- Maintain a quiet, dark bedroom
- Maintain a comfortable temperature (slightly cool)
- Decrease stimuli (tv, phone,)
- Avoid prolonged use of light-emitting screens (laptops, tablets, smartphone)
- Avoid sleep-fragmenting substances near bedtime
  - Avoid caffeine at least six hours before bedtime
  - Avoid alcohol within three to four hours before bedtime
- Exercise regularly but avoid exercise just before bedtime
- “Turn the house down” 1-2 hours before bedtime
- Avoid daytime naps
Behavioral intervention to increase homeostatic sleep drive
Assists with sleep consolidation and sleep efficiency
Limit the time in bed to the actual time sleeping only
Schedule sleep according to patient's total average sleep time
Requires use of a sleep diary
Reinforces association of the bed/bedroom with sleep only

Wake up and go to bed at a consistent time every day
  - Strengthens the circadian rhythm of sleep regulation

Use the bed for sleep and sex only

Only go to bed when sleepy

Get out of bed if not asleep within 20 minutes
  - Go to another room
  - Return to bed only when sleepy
  - Repeat this step as many times as necessary throughout the night

No TV, electronics, reading, eating, exercising or rumination in bed

No naps
Progressive relaxation/Relaxation Response
Breathing techniques
Guided Imagery
Meditation
6-10 sessions using all approaches

Sample 8 week CBT-I

- Introductory Sleep Education session x1
- Stimulus Control and Sleep Restriction x2 sessions
- Cognitive therapy x2 sessions
- Sleep hygiene x1 sessions
- Review and integration of all information x1 session
- Future problems, stress and relapse x1 session
- "I’ll never get to sleep"
- Negative thinking
- Cognitive Distortions

- Hyperarousal
- Fatigue

- Problem falling asleep
- Excessive time in bed
- Daytime naps

• Anxious
• Stressed
Primary Care Providers can learn CBT-I
Understand behavioral principles of CBT-I
Become comfortable with a sleep diary
Educational focus lends itself well to alternative delivery methods
- Telephone-based CBT-I
- Internet-based CBT-I

CBT-I in primary care
1. Have patient complete a sleep diary for 2 weeks
2. Review the diary with the patient at follow-up appointment
   a. Note the variation in bedtimes and rise times
   b. Determine appropriate bedtime & rise time by estimating average sleep time
   c. Patients choose a rise time that can be maintained 7 days a week
   d. The bedtime is set according to the initial sleep window
   e. Patient should only be in bed for the average sleep time plus 30 minutes (not < 5 hours)
   f. Warn patient about excessive daytime sleepiness that can occur and caution about driving if drowsy
3. 2-4 appointments may be needed to adjust the sleep window according to patient’s progress
4. The rise time stays constant while the bedtime is adjusted earlier as sleep improves
5. As sleep improves, the sleep window is widened, usually by 15 minutes at a time
6. This continues until sleep is long enough for the patient to feel rested and function well during the day

**USING A SLEEP DIARY**
INSTRUCTIONS:
1. Write the date, day of the week, and type of day: Work, School, Day Off, or Vacation.
2. Put the letter “C” in the box when you have coffee, cola or tea. Put “M” when you take any medicine. Put “A” when you drink alcohol. Put “E” when you exercise.
3. Put a line (I) to show when you go to bed. Shade the box that shows when you think you fell asleep.
4. Shade in all the boxes that show when you are asleep at night or when you take a nap during the day.
5. Leave boxes unshaded to show when you wake up at night and when you are awake during the day.

SAMPLE ENTRY BELOW: On a Monday when I worked, I jogged on my lunch break at 1 PM, had a glass of wine with dinner at 6 PM, fell asleep watching TV from 7 to 8 PM, went to bed at 10:30 PM, fell asleep around Midnight, woke up and couldn’t get back to sleep at about 4 AM, went back to sleep from 5 to 7 AM, and had coffee and medicine at 7:00 in the morning.

| Today’s Date | Day of the week | Type of Day | Noon | 1PM | 2PM | 3PM | 4PM | 5PM | 6PM | 7PM | 8PM | 9PM | 10PM | 11PM | 1AM | 2AM | 3AM | 4AM | 5AM | 6AM | 7AM | 8AM | 9AM | 10AM | 11AM |
|--------------|-----------------|-------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| sample       | Mon.            | Work        | E    | A   | I   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
INSOMNIA: Technology

- Apps
  - Virtual Coaching
  - Meditation
  - Nature sounds
  - Behavior logs
  - Sleep logs/diaries

- Sleep Health Using The internet
  - SHUTi
  - Web-based CBT-I therapy
  - 6 week automated interactive program
  - *JAMA Psychiatry*, online November 30, 2016
When other approaches prove inadequate for acute, situational insomnia
Treatment Acute insomnia sometimes progresses to a chronic condition
BDZ-Receptor Agonist “Z-drugs” (zopiclone and zolpidem) are currently the standard medications for insomnia
BDZ risks outweigh the benefits
All sedative hypnotic classes carry risks and caution is warranted
Considerations
- The nature of the sleep disturbance
- Whether insomnia is acute or chronic
- Presence of other medical or psychiatric conditions
- Hx of alcohol use disorder or recreational drug use
- Side effects
- Cost

Pharmacotherapy
Association with complex sleep-related behaviors

- Sleepwalking
- Eating
- Driving
- Sexual behavior

Risk Factors

- Use with alcohol
- Hx of brain injury
- Elevated doses
- Hx of parasomnias

Cautions

- Not recommended in pregnant or nursing women
- Not recommended in advanced liver disease
- Rebound insomnia

Pharmacotherapy: BDZ-Receptor Agonists

- Zolpidem/Ambien
- Eszopiclone/Lunesta
- Zaleplon/Sonata
Effects on sleep
- Reduce time to sleep onset
- Prolong Stage 2 sleep
- Prolong total sleep time
- Slight reduction in REM sleep

Slow tapering is recommended to prevent rebound insomnia
- Best done in conjunction with CBT-I, or at least behavioral advice
- Improved results when taper combined with CBT-I

PHARMACOTHERAPY: BENZODIAZEPINES
Effects on sleep
- Improvement in subjective sleep latency
- No improvement in other parameters
- Ramelteon is more effective in tx sleep onset insomnia >> sleep maintenance insomnia
- Beneficial for sleep/wake cycle shifts

Adverse Effects
- Headache
- Nausea
- Fatigue
- Irritability
- Constipation

PHARMACOTHERAPY: Melatonin Agonists
- Decreased sleep latency
- Olanzapine may increase NREM sleep
- Quetiapine may reduce REM sleep
- Atypical antipsychotics should be avoided in the first-line tx of insomnia
- Significant potential risks
  - Weight gain
  - Akathisia
  - Metabolic syndrome
  - Orthostatic hypotension
## INSOMNIA: Pharmacotherapy Choices

### CONSIDER
- Low-dose Doxepin (Silienor)
- BDZ-RA
- Melatonin Agonists (sleep shifts)
- Orexin Receptor antagonists
- Low-dose Trazodone

### NOT RECOMMENDED
- Benzodiazepines
- Diphenhydramine
- Antipsychotics
- Barbiturates
- Anticonvulsants
- Herbal
- Alcohol
- Antidepressants
PHARMACOTHERAPY: Considerations

- Use the minimal effective dose
- Avoid medications with a long half-life
- Be aware of potential drug-drug interactions
- Caution patients about interaction with alcohol
- Review potential side effects, especially daytime sleepiness
- Agree on an appropriate duration of use
- Start with a BDZ-Receptor Agonist for acute or short-term insomnia
- Look for rebound insomnia after discontinuation
- Consider intermittent use of hypnotic medications when long-term therapy is required
- Consider sleep specialist consultation before starting continuous, long-term tx with hypnotic medication
Continuous therapy
- Limit to 4-5 weeks
- Conduct periodic tapering and discontinuation trials to determine when continuous therapy can be stopped

PRN therapy
- Limit to 6 months
- Reserve for patients who can assess when drug treatment will be helpful

Refer to specialist if insomnia does not remit within 7-10 days
Avoid prolonged or excessive therapy
Always provide guidance on CBT-I
Discuss risks and benefits of drug therapy

PHARMACOTHERAPY: Duration
## SEDATIVE HYPNOTICS

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<th>PROS</th>
<th>CONS</th>
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<tr>
<td>➢ Efficacy</td>
<td>➢ Psychologic dependence</td>
</tr>
<tr>
<td>➢ Rapid effect</td>
<td>➢ Abuse</td>
</tr>
<tr>
<td>➢ Relatively safe w/short-term use</td>
<td>➢ Addiction</td>
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<tr>
<td>➢ Combined with CBT-I, less needed</td>
<td>➢ Withdrawal</td>
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<tr>
<td></td>
<td>➢ Long-term effects</td>
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<tr>
<td></td>
<td>➢ Drug-drug interactions</td>
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<tr>
<td></td>
<td>➢ Can mask underlying condition</td>
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<td></td>
<td>➢ Increased risk of mortality</td>
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<tr>
<td></td>
<td>➢ Side effects</td>
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</table>
- Psychomotor impairment
- Unknown long-term side effects
- Withdrawal, dependence, tolerance, rebound effects
- Improved sleep quality on discontinuation of hypnotics
- Improved cognition upon discontinuation (delayed effect)
- Linked to the development of dementia
- Association with suicidal ideation

**SEDATIVE HYPNOTICS: Side Effects**
HYPNOTIC MEDICATION: Decreasing Suicide Risk

STEPS FOR DECREASING SUICIDE RISK WHEN PRESCRIBING HYPNOTIC MEDICATION

1. Prescribe the lowest possible effective dosage.
2. Avoid prescribing a dosage greater than the FDA recommended maximum dosage.
3. Avoid combining with alcohol, especially alcohol consumed close to bedtime.
4. Avoid combining with other medications that have sedative, hypnotic, or similar effects.
5. Avoid prescribing BDZ and BDZ-RA hypnotics to patients at risk for untreated obstructive sleep apnea.
6. Instruct the patient to take the hypnotic at a time of day that would maximize the probability of sleeping; that is, when the homeostatic sleep drive would be at its highest and the circadian alerting signal at its lowest. Under the circumstances of a socially normative sleeping schedule, this would be between 9 p.m. and 1 a.m.
7. Instruct the patient to go to bed, with the intention of sleeping, within 15 minutes after dosing.
8. Instruct the patient to remain in bed for the full time required for the drug to be fully eliminated.
9. Instruct patients not to take the drug if there is insufficient time for drug elimination between their planned bedtime and their planned rising time.
10. Discontinue the hypnotic if there are new episodes of parasomnia.

Adapted from Hypnotic Medications and Suicide Risk. Am J Psychiatry 174:1, January 2017
POSSIBLE MECHANISMS UNDERLYING LINK TO DEMENTIA

- Stimulation of GABA inhibits neuronal activity and may lead to permanent functional deficits
- Reduced function of Acetylcholine
- CNS Depressant effects
- Reduced Dopamine function
- Neurodegeneration
- Receptor depletion

RISK FACTORS: Frequency, Dosage, specific drug, patient-specific factors
Sedating antihistamines
- Cardiopulmonary disease, glaucoma, problems w/ urination

Sedative-hypnotics
- May increase the risk of fetal malformations during 1st trimester of pregnancy
- Breastfeeding
- Underlying medical disorders in which sedation detrimental
- Do not combine with alcohol

Any sedating mediation
- Alcohol or another sedating medication
- Driving or using hazardous equipment
- All medications
- History of alcohol or drug abuse

Use more cautiously in elderly
Beware potential interaction with complementary and alternative medications

PHARMACOTHERAPY: Contraindications
COMMUNON NON-PRESCRIPTION SLEEP AIDS

- Alcohol
  - Reduces sleep latency and may improve early sleep
  - Highly disruptive of other sleep parameters
  - Physiological and psychological dependence
- Antihistamines
  - Can cause confusion, memory loss, dizziness, blurry vision, motor impairment
  - Sedation may carry over until daytime
  - Psychological dependence
- Herbal Remedies
  - Valerian
    - May reduce sleep latency
    - Can cause impaired cognition
    - Some people experience stimulant effect
  - Chamomile
  - Kava (Induces relaxation)
- Provide ongoing assessment of comorbidities
- Reinforce sleep hygiene and cognitive/behavioral techniques
- Monitor response and adjust therapy as indicated
- Be clear in communicating to patients the requirement for short-term use of hypnotics
- Schedule frequent visits for patients with psychophysiological insomnia
  - Ensure patient understands and carries out behavioral recommendations
WHEN:
- Suspicion of an underlying sleep or medical disorder
- Poor response to behavioral interventions / drug therapy

WHO:
- Psychiatrist: possible psychiatric disorder, complex pharmacology requirement
- Pulmonologist: suspected sleep disordered breathing
- Otolaryngologist, oral surgeon, or dentist: excessive snoring or other oropharyngeal or airway issues
- Neurologist: possible Parkinson disease, cerebrovascular disease, or dementia

INSOMNIA: Specialist Referral
➢ **Recommendation 1**: ACP recommends that all adult patients receive cognitive behavioral therapy for insomnia (CBT-I) as the initial treatment for chronic insomnia disorder.

(Grade: strong recommendation, moderate-quality evidence)

➢ **Recommendation 2**: ACP recommends that clinicians use a shared decision-making approach, including a discussion of the benefits, harms, and costs of short-term use of medications, to decide whether to add pharmacological therapy in adults with chronic insomnia disorder in whom cognitive behavioral therapy for insomnia (CBT-I) alone was unsuccessful.

(Grade: weak recommendation, low-quality evidence)
Insomnia is common complaint in primary care

CBT-I is the first-line treatment for chronic and comorbid insomnia

Elements of CBT-I can be adapted for primary care settings

Pharmacotherapy should be used very judiciously, and not longer than 4-5 weeks.

In certain cases, longer term intermittent use of pharmacotherapy may be used.

FDA recommends further evaluation of patients when insomnia does not remit within 7-10 days

Use lower doses in older adults, if medication is required

