PRACTICAL APPROACH TO INSOMNIA in PRIMARY CARE

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LEARNING OBJECTIVES

- To understand basic sleep physiology
- To know the evidence for effectiveness of nonpharmacologic and pharmacologic treatment of chronic insomnia
- To understand cognitive and behavioral factors that cause insomnia
- To develop an approach to using cognitive and behavioral interventions in the primary care setting
BED IS A MEDICINE.

Italian proverb
How do you typically manage primary insomnia?

A. Educate patient about sleep hygiene
B. Provide psychological and/or behavioral intervention in your office setting (e.g. CBT, relaxation training)
C. Refer elsewhere for psychological and/or behavioral intervention
D. Prescribe medication
E. Both A and D
Which one of the following has not been clearly shown to be effective for primary insomnia?

A. Sleep hygiene education
B. Sleep restriction
C. Relaxation training
D. Cognitive-behavioral therapy
Which treatment for primary insomnia has the best evidence of effectiveness for use over 6 months?

A. Hypnotic medications (such as zolpidem, eszopiclone)
B. Cognitive-behavioral therapy
C. CBT plus hypnotic medications
INSOMNIA BY THE NUMBERS

20,000,000,000 $ spent on sleep-related products/year

4,000,000,000 $ spent on prescription sleep meds/yr

800,000,000 $ spent on Lunesta rx in 2008

50,000,000 Est. Americans with disorder of sleep

# INSOMNIA BY THE NUMBERS

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>15</td>
<td>no. of minutes difference in sleep onset between Lunesta and placebo(^1)</td>
</tr>
<tr>
<td>9</td>
<td>no. of minutes difference in time awake during night between Lunesta and placebo(^1)</td>
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<tr>
<td>25</td>
<td>$ cost of on-line CBT program(^2)</td>
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</table>

2. [www.cbtforinsomnia.com](http://www.cbtforinsomnia.com)
Psychological and behavioral interventions are superior to pharmacologic therapy in the management of insomnia.

These interventions can be delivered effectively in the primary care setting.
Our Agenda

- Basics of sleep physiology
- Evaluation of insomnia
- Pharmacologic therapy
- Cognitive and behavioral therapy in the primary care setting
Basics of sleep physiology
The Sleep Cycle

- AWAKE
- REM
- STAGE 1
- STAGE 2
- STAGE 3
- STAGE 4

Hours of Sleep

1 2 3 4 5 6 7
Psychologic/ Neurophysiologic
behavioral factors systems

Behavioral practices

Emotional arousal

Homeostatic System

Circadian System

Arousal System
Development of Insomnia

PREDISPOSING FACTORS

PRECIPITATING EVENTS

PERPETUATING ATTITUDES AND BEHAVIORS
Physiologic characteristics of insomniacs

- Greater physical tension
- Greater brain activity
- Smaller changes in body temperature
- Initiation problems: temperature drops later
- Maintenance problems: smaller drops in temperature in the night
Insomnia with Short Sleep Duration and Mortality: the Penn State Cohort

Vgontzas AN. Sleep 2010;33:1159

insomnia + sleep < 6 hrs
OR for mortality (CI)

Men
4.0 (1.14 – 13.99)

Women
No effect on mortality
Evaluation of insomnia
Diagnosis of Insomnia
ICSD 2nd edition

- One or more sleep-related complaints
  - Problems with sleep initiation
  - Problems with sleep maintenance
  - Waking up too early
  - Nonrestorative sleep

- Adequate opportunity for sleep exists
Diagnosis of Insomnia
ICSD 2^{nd} edition

- At least one perceived daytime impairment
  - Fatigue or malaise
  - Attention, concentration, or memory problems
  - Mood disturbance or irritability
  - Daytime sleepiness
  - Motivation, energy, or initiative reduction
  - Tension, headaches, or GI symptoms related to sleep loss
  - Concerns or worry about sleep
  - Social or work dysfunction
  - Proneness for errors or accidents
Evaluation: Key Points in History and Exam

- Chronology
- Difficulty initiating vs. frequent awakenings (or both)
- Specific symptoms around onset, during sleep, during day
- Exam: obesity, crowded oropharynx, short thick neck
Is it primary insomnia?

Primary insomnia: conditioned arousal in response to efforts to sleep and negative expectations

Or insomnia associated with a medical or psychiatric condition?

Cognitive and behavioral approaches show efficacy even when co-morbidities present
Insomnia co-existing with other conditions

- Psychiatric disorders: depression, anxiety, PTSD
- Pain
- Medical conditions, e.g. sleep apnea, COPD, restless legs, menopause
- Caffeine, tobacco, alcohol, and other substance abuse
Who should be referred for a sleep study?

- Excessive daytime sleepiness (>10 on Epworth scale) with
  - Obesity
  - Loud snoring
  - Witnessed apneic episodes

- Insomnia for >6 months with no evidence medical, neurologic, or psychiatric cause, not responsive to behavioral or pharmacologic treatment
Epworth Sleepiness Scale

0 = would never doze   3 = high chance

Sitting and reading
Watching TV
Sitting inactive in public place
As passenger for an hour
Lying down during day
Sitting and talking to someone
Sitting quietly after lunch without alcohol
In car, stopped for few minutes in traffic

Score > 10 = excessive daytime sleepiness
Pharmacologic therapy
## Medications for Insomnia: FDA-approved

<table>
<thead>
<tr>
<th>Benzodiazepines</th>
<th>Duration ($T_{1/2}$)</th>
<th>Cost*</th>
<th>Benzodiazepine-receptor agonists</th>
<th>generic</th>
<th>brand</th>
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<tbody>
<tr>
<td>temazepam</td>
<td>inter (8-15 h)</td>
<td>20</td>
<td>zaleplon (Sonata)</td>
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<td>95</td>
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<tr>
<td>estazolam</td>
<td>inter (10-24h)</td>
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<td>zolpidem</td>
<td>18</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Intermezzo (sl)</td>
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<td>127</td>
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<td></td>
<td></td>
<td></td>
<td>Ambien CR</td>
<td></td>
<td>136</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>eszopiclone (Lunesta)</td>
<td></td>
<td>169</td>
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*wholesale pharmacy cost per month
Medications for Insomnia: FDA- approved

<table>
<thead>
<tr>
<th>Tricyclic antidepressant</th>
<th>Duration ($T_{1/2}$)</th>
<th>Cost*</th>
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</thead>
<tbody>
<tr>
<td>doxepin</td>
<td>long (8-24 h)</td>
<td></td>
</tr>
<tr>
<td>tablet 3, 6 mg (Silenor)</td>
<td>generic: $195</td>
<td>brand: $25</td>
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<tr>
<td>liquid 6 mg**</td>
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<table>
<thead>
<tr>
<th>Melatonin-receptor agonist</th>
<th>Duration</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ramelteon (Rozerem)</td>
<td>short (2-5 h)</td>
<td>81</td>
</tr>
</tbody>
</table>

*wholesale pharmacy cost per month

**liquid form not FDA approved for this indication
Medications for Insomnia: not FDA-approved

<table>
<thead>
<tr>
<th>Benzodiazepines</th>
<th>Duration ($T_{1/2}$)</th>
<th>Peak</th>
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</thead>
<tbody>
<tr>
<td>lorazepam</td>
<td>inter (12-15 h)</td>
<td>2 h</td>
</tr>
<tr>
<td>oxazepam</td>
<td>inter (8 h)</td>
<td>1 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Antidepressants</th>
<th></th>
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<tbody>
<tr>
<td>trazodone</td>
<td>inter (5-9 h)</td>
<td>1-2h</td>
</tr>
<tr>
<td>doxepin</td>
<td>long (8-24 h)</td>
<td>2-4h</td>
</tr>
<tr>
<td>mirtazapine</td>
<td>long (20-40h)</td>
<td></td>
</tr>
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</table>
Supplements and herbal remedies

- **Melatonin**
  - Some evidence for benefit in patients with delayed sleep phase syndrome
  - Safety evidence good for 3 months only
  - Can have adverse effects on mood
  - Dose ranges 1 - 3 mg

- **Valerian**
  - Multiple studies with no clear evidence for benefit
Evidence for complementary therapies in insomnia

Fair evidence for benefit:
- acupressure
- tai chi
- yoga

Mixed evidence for benefit:
- acupuncture
- L-tryptophan

No evidence for benefit:
- Valerian

Cognitive and behavioral therapy

“Skills, not pills.”
Psychological and behavioral interventions are superior to pharmacologic therapy in the management of insomnia.

These interventions can be delivered effectively in the primary care setting.
Evidence for effectiveness of cognitive-behavioral interventions

- Three meta-analyses: 70-80% of adults with insomnia benefit from interventions based on CBT\(^1\)\(^-\)\(^3\)
- RCT of zolpidem vs. CBT in young- and middle-aged adults\(^4\):
  - CBT alone equal or better than CBT+zolpidem
- RCT of zopiclone vs. CBT in older adults\(^5\):
  - CBT more effective than zopiclone in short- and long-term

Long-term effectiveness of CBT alone vs combination of CBT + drugs

- CBT maintains effectiveness at up to 2 years but combined therapy does not\(^1\)-\(^3\)

- In patients on long-standing benzodiazepines, use of CBT results in higher rates of success in stopping drug therapy\(^4\),\(^5\)

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\(^1\) Morin CM JAMA 1999  \(^2\) Jacobs GD. Arch Intern Med 2004  \(^3\) Hamill PJ Sleep 1997  \(^4\) Baillargeon L. CMAJ 2003  \(^5\) Morin CM. Am J Psych 2004
CBT, singly and combined with medication, for persistent insomnia: a randomized controlled trial

**Population:** adults in Quebec

**Insomnia:**
- >30 min latency or wake time
- sleep duration < 6.5 hours, 3 nights/week
- present for >6 months
- causing distress or impaired daytime function

**Interventions:**
- Phase I: 6 weeks
- Phase II: 6 months

**Outcomes:** sleep time; response and remission rates

CBT, singly and combined with medication, for persistent insomnia: a randomized controlled trial

CBT, singly and combined with medication, for persistent insomnia: a randomized controlled trial

Results

Sleep time:

6 wks: CBT and CBT/zolpidem both effective

6 months:

Initial CBT alone: continued CBT produced no added benefit

Initial CBT + med: pts who stopped meds after 6 weeks did better than those who continued with intermittent rx

Implementing Nonpharmacologic Treatment for Insomnia in Primary Care

- Multiple approaches can be effective
  - Standard CBT 20-50 min in 4-6 sessions
  - Abbreviated CBT (25 min session x 2)
  - Internet, other self-help programs
  - Can be delivered by PCP, RN, psychologist

- Can provide brief interventions in office, or refer

- ICD 9 code: 780.52 intrinsic sleep disorder NOS (medical diagnosis)
Brief Behavioral Treatment of Chronic Insomnia in Older Adults
Buysse DJ et al. Arch Int Med 2011

RCT of Brief Rx (2 sessions, 2 phone follow-ups)
Emphasis on behavior change (sleep consolidation)
Followed at 1 month and 6 months

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
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</thead>
<tbody>
<tr>
<td>Response</td>
<td>67%</td>
<td>25%*</td>
</tr>
<tr>
<td>No insomnia</td>
<td>55%</td>
<td>13%*</td>
</tr>
</tbody>
</table>

Significant benefits also for: self-reported sleep; health; actigraphy

*p < .001
Key components of insomnia treatment in primary care

- Lifestyle and environmental factors: stimulus control
- Sleep restriction
- Cognitive restructuring
- Relaxation techniques
Lifestyle factors that affect sleep by increasing arousal
Light affects sleep

- Lack of light increases melatonin, causes body temperature to fall, and promotes sleep onset
- Light decreases melatonin and causes body temperature to increase, which in turn promotes wakefulness
Effects of Light and Exercise on Body Temperature

[Graph showing the effects of light and exercise on body temperature throughout the day and night.]
The Role of Exercise in Sleep
Exercise improves sleep

• Exercise increases daily rise and fall in body temperature and improves sleep
  – Drop in temperature promotes sleep onset
  – Exercise more than three hours before bed if possible
  – If unable to exercise, hot bath 3 hrs before bed will promote temperature rise and fall

• Physical stress of exercise increases deep sleep
Light rx for sleep onset insomnia: difficulty falling asleep

- Body temperature falls too late

Rx:
- Exposure to early morning sunlight associated with earlier rise in body temperature and easier sleep onset
Light rx for sleep maintenance insomnia: early morning awakening

- Body temperature falls too early

Rx:
- Increase exposure to evening bright light
- Light box: 10,000 lux for 30-40 min
Stimulus control: the bed as a signal for sleep

- Avoid stressful activities during hour before bed
- Keep sleeping area cool, dark, quiet
- Use bed for sleep (and sex) only
- Limit time spent in bed while awake: improve sleep “efficiency”
  \[
  \text{sleep efficiency} = \frac{\text{time asleep}}{\text{time in bed}}
  \]
  goal: 85%
The Sleep Diary

What time did you get to bed? Turn lights off?
How long did it take to fall asleep?
How many times did you awaken?
  How long awake for each one?
What time was final wake up? Time out of bed?
How many hours did you sleep last night?
How many hours did you spend in bed?
Sample sleep diary

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time</th>
<th>Sleep hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Went to bed</td>
<td>11:00 p.m.</td>
<td></td>
</tr>
<tr>
<td>Lights off</td>
<td>11:15</td>
<td></td>
</tr>
<tr>
<td>Fell asleep</td>
<td>? 12:00 a.m.</td>
<td>2</td>
</tr>
<tr>
<td>Awake for ~1/2 hr</td>
<td>2:00</td>
<td>1.5</td>
</tr>
<tr>
<td>Awake for ~1 h</td>
<td>4:00</td>
<td></td>
</tr>
<tr>
<td>Final wake up</td>
<td>7:00</td>
<td></td>
</tr>
<tr>
<td>Got out of bed</td>
<td>7:30</td>
<td></td>
</tr>
</tbody>
</table>

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sleep efficiency

hours slept          5.5 h
hours in bed         8.5

SLEEP EFFICIENCY: 65%
(normal = 85%)
Prescribing Sleep Restriction

Increases sleep drive through partial sleep deprivation
Allows sleep to be consolidated
Rx for Sleep Restriction

Choose a week of relatively low demands to start
Reduce time in bed based on sleep diary
  Total time in bed = mean sleep duration + ½ hour
    (no less than 6 h)
Keep lights up, do lightly stimulating activity in evening until set bedtime
At outset or during the night, if wakeful for more than 20 – 30 minutes, get up, do planned quiet activity
  Go back to bed when drowsy
Get up at set waking time, even if tired
Try to get early exposure to light and some exercise
Rx for Sleep Restriction

Most will see improvement in sleep efficiency within a week

When reach sleep efficiency of 85%, increase time allocated for sleep by 15 to 30 minutes

Continue to increase until sleep efficiency stabilizes
Naps

- Can be beneficial -- but use with care
- Can compensate for sleep lack due to voluntary deprivation or very early rising
- 20 to 40 min, 12 ± 2 hours before midpoint of usual night sleep period
- Avoid during sleep restriction phase of insomnia treatment; instead, use time for relaxation response
- Caution when delayed sleep onset present
Changing Negative Sleep Thoughts

- Most insomniacs worry excessively about sleeping
- Changing negative thoughts about sleep can have a significant effect on insomnia
Negative Sleep Thoughts

- Often automatic
- Often incorrect
- Stir up negative feelings and frustration
- Negative feelings set off stress response
  - Increase heart and respiratory rate
  - Raise blood pressure
  - Increase muscle tension
  - Activate arousal system
Evidence to counter fallacies about sleep

- Most people get more sleep than they think
- Most can function on 5 ½ hours of sleep (core sleep) – even if interrupted
- No evidence that health impaired by decreased sleep if get core sleep
- Main effect of insomnia is on mood; most studies of cognitive and motor function show no consistent effect on loss of alertness or performance
Promoting Positive Sleep Thoughts

- First step – identify negative sleep thoughts
- Write down negative sleep thoughts
- Assess the distortions
- Replace with positive sleep thoughts
Negative

- I will not fall asleep tonight
- I’ve got to have 8 hours of sleep
- I will get sick from so little sleep

Positive

- I will fall asleep sooner or later
- I need less sleep than I think
- If I get my core sleep, I’ll function OK
Stress Response

- Physiological changes associated with arousal set off by fearful or stressful situation
- Increased heart rate, respiratory rate, blood pressure, muscle tension, brain wave activity, blood glucose levels, energy, and sensory acuity
Chronic Stress Response

- Interferes with sleep
- Reduced deep sleep
- Increased stress hormones throughout the day
- Wakefulness system operating day and night
Relaxation Response

- Identified by Dr. Herbert Benson
- “Body’s inborn counterbalancing mechanism to stress response”
- Physiological changes:
  - Decreased brain waves, breathing, heart rate, blood pressure, stress hormones
  - Increased blood flow to extremities, relaxation of muscles
Four Ingredients Associated with the Relaxation Response

- Minimal distractions – eyes closed and quiet surroundings
- Muscles relaxed and comfortable posture
- Mental focusing
  - breathing
  - repetition of a word
  - image
- Passive disregard of everyday thoughts
Relaxation Response

- Improves sleep by:
  - counteracting stress response all day and decreasing stress hormones day and night
  - stopping negative sleep thoughts when practiced at night

- Produces brain waves similar to stage I sleep (the transition state)

- Good alternative to nap
Practicing the Relaxation Response

- Ten to twenty minutes a day
- Quiet place and comfortable posture
- Any mental focus that works is fine
- It does not work for a few individuals
Weaning sleep medications

- Make sure patient has tools from CBT to use during weaning process
- Reduce dose by half **one** night per week
- After 1-3 weeks, reduce by half **two** nights per week
- After reach point where taking half-dose every night, skip one night per week
- Gradually reduce frequency to eliminate regular use
- Schedule follow-up during weaning process
Insomnia in special populations

- Shift workers
- Elderly patients
Shift Work and Sleep

● Optimize daytime sleep
  – Minimize light exposure in a.m.
  – Make sleep environment dark, quiet
  – Limit caffeine close to bedtime
  – Keep to sleep schedule

● Maintain alertness at work
  – Stay active during breaks
  – Short nap mid-shift if possible
  – Do more demanding tasks early in shift

● Social adaptations
Sleep Changes over Life Cycle

- Decreases from 8 hours in young adulthood to 6 ½ hours in 70s
- Deep sleep decreases; awakenings increase
- Daytime sleep propensity and maximum capacity for sleep are reduced
- Older adults tolerate sleep deprivation better than younger adults
Elderly patients with insomnia and Alzheimer’s disease: what can help?

Light therapy$^1$
- 2,500 lux for 1 hour, 2-3 ft distance, within 3 hours before bedtime

Exercise

Behavioral factors
- fixed sleep, wake time; limit naps;
  identify triggers for nighttime wakenings

Melatonin has mixed effects in elderly patients in long-term care facilities

- Melatonin 2.5 mg shortened sleep onset time and increased sleep duration; but negatively affected mood¹
  - No adverse mood effect if combined with bright daytime light
- Melatonin 2.5 mg + Mg 225 mg + zinc 11 mg 1 hour before bed improved quality of sleep and quality of life²

¹ Riemersma-van der Lek RF, JAMA 2008;299:2642
Implementing treatment for insomnia in Primary Care

Sleep diary is key

Patient must take an active role

Tailor treatment approach to patient:
- brief visits with PCP, RN
- Internet, print self-help programs
- referral for formal CBT-I

For list of certified CBT-I clinicians:
www.behavioralsleep.org
Step 1.
- Review environmental and lifestyle factors that may contribute
- Review sleep behaviors
- Give patient sleep diary
- Introduce concept that changes in behaviors and thoughts can promote better sleep, no matter what is causing insomnia
- Screen for concurrent medical or psychiatric conditions that need specific management
Step 2.
- Review sleep diary for average total sleep time and hours in bed to determine sleep efficiency
- If sleep efficiency < 80%, prescribe sleep restriction
- Assess negative attitudes and perceptions about sleep; reframe
- Introduce relaxation technique and advise patient to practice during daytime for 10-15 minutes daily
Stepped Approach to Insomnia

- Step 3.
  - Review progress subjectively and based on sleep diary
  - Advise patient to practice relaxation technique at bedtime and during awakenings
  - If sleep problem still very bothersome and if no history of substance abuse, consider prescribing hypnotic/sedative as “safety net” to use if ≥ 2 nights of poor sleep
  - Consider referral if substance abuse, other psychiatric condition, or primary sleep disorder suspected
Patient Education Resources

ONLINE

A Good Night’s Sleep. Age Page, National Institute on Aging

www.nia.nih.gov/HealthInformation/Publications/sleep.htm

Basic information for older patients

National Sleep Foundation www.sleepfoundation.org

Broad range of topics

CBT for Insomnia (Gregg Jacobs, PhD)

www.cbtforinsomnia.com

Online interactive 5 session program at nominal cost
CASES
Case 1.

56 year old secretary
CC: “I’m having problems with sleep and it’s starting to interfere with my job.”

Sleep history:
Never a great sleeper, worse in past 4 years
Trouble falling asleep, wakens during night
Draggy in afternoon, can’t focus at work

Medical history:
Healthy
Case 1.

**Lifestyle factors**
Diet: tea in a.m. and p.m.
Exercise: occasional walks at lunch
Alcohol, cigarettes: none

**Environment**
Curtains closed at night
Noisy neighbors
Case 1.

Behaviors
Watches TV in p.m., sometimes falls asleep
10:00 bedtime “so I have time to get to sleep”
If wakeful, lies in bed, tries to go back to sleep
Stays in bed after a bad night of sleep
Sleeps later on weekend

Attitudes
Dreads bedtime; convinced insomnia affecting her work
Sleep diary 9 hours in bed, 6 hours asleep. 67%
Case 2.

43 year old unemployed salesman
CC: “I’m just not sleeping. I’ve got a lot to do and I can’t afford to be tired.”

Sleep history:
Onset of problems past year (after knee surgery)
Exhausted, falls asleep easily; wakens in early a.m.
Bedtime at 12 (stays up to see wife)
Wakes up at 2, sometimes 4 for an hour
Up at 6 to get daughter to school

Medical history:
Asthma; knee problem (unable to exercise much)
Case 2.

**Lifestyle factors**
Diet: snack 11:30 pm; coffee in a.m, diet coke lunch, dinner
Exercise: housework
Alcohol, cigarettes: sometimes a beer with bedtime snack

**Environment**
TV in bedroom
Case 2.

Behaviors
When wakeful, goes into other room to watch TV or use computer
Frets about to-do list
Sometimes takes nap at 4

Attitudes
Worries he’ll get sick from lack of sleep; job; finances
Sleep diary 6 hours in bed, 4.5 hours asleep. 75%
Case 3.

68 year old woman on chronic benzo for sleep
CC: “I’ve had to take this sleeping pill since my husband died.”

Sleep history:
Never a good sleeper.
Onset of insomnia 5 years ago after husband died.
Depression treated with citalopram, stopped 2 years ago.
Falls asleep easily with medication and sleeps through night
Slow getting going in morning

Medical history:
Osteoarthritis of hip, hypertension
Meds: HCTZ, lisinopril, occasional ibuprofen, temazepam
Case 3.

Lifestyle factors
Diet: coffee in morning, sometimes tea in afternoon
Exercise: housework, swims twice a week
Alcohol, cigarettes: occasional glass of wine

Environment
Keeps home and bedroom warm
Case 3.

Behaviors:
Taking temazepam 15 mg at bedtime every night

Attitudes
Doesn’t like sleeping pill, but resigned to it.

Sleep diary  8.5 hours in bed, 7 hours asleep 82%
Discontinuation of benzodiazepines

- Select target date with patient
- Engage patient in self-monitoring and setting targets for reducing dosage
- Use gradual tapering schedule
  - Reduce dose by 25% at intervals of 1-2 weeks until lowest available dosage is reached
Discontinuation of benzodiazepines

- Introduce “drug holidays”
  - Skip one night first week, then 2, etc.
  - Patient selects in advance which night to skip
  - When taking a few nights/week, stick with those pre-selected nights (to weaken association between sleeplessness and drug-taking behavior)
Discontinuation of benzodiazepines

- Stop the medication
- Make plan for relapse prevention
  - Anticipate situations likely to precipitate insomnia
  - Plan other strategies to employ (e.g. exercise, use of bedtime rituals)
INSOMNIA CASE #1

56 year old woman, secretary

Cc: “I’m having problems with sleep and it’s starting to interfere with my job”

Sleep history:
Never a great sleeper, problems worse in past 4-5 years
Sometimes has trouble falling asleep and wakens several times during the night
Feels draggy in afternoon, can’t focus on tedious job

Other medical issues: Otherwise healthy
What other symptoms do you look for?

Diet: tea at breakfast and in afternoon. Doesn’t eat after supper due to weight concerns.

Exercise: sedentary lifestyle; walks at lunch occasionally for 20 min
Alcohol: none
Smoking: no

Environment: draws the curtains in bedroom at night. Sometimes hears noise from neighbors coming and going in late evening.

Behaviors: watches TV after dinner, sometimes falls asleep while watching
Goes to bed at 10 so she can have plenty of time to get to sleep
When wakes up during night, lies in bed and tries to go back to sleep
Tries to get up at 7, but sometimes stays in bed until 8 after night of poor sleep
Sleeps later on the weekend

Attitudes: dreads bedtime; convinced she can’t function at work after poor sleep

Sleep diary: 9 hours in bed; 6 hours asleep. Sleep efficiency: 67%

What are the key elements of your treatment approach?
- Environment, lifestyle factors
- Stimulus control
- Cognitive restructuring
- Relaxation
INSOMNIA CASE #2

43 year old man, unemployed salesman

Cc: “I’m just not sleeping. I’ve got a lot to do and I can’t afford to be tired.”
No problems with sleep until a year ago, when had knee surgery with complications.
Lost his job 3 months after surgery. Now taking care of house and looking for work. Wife
works as RN 3-11, one teenage daughter.

Sleep history: Exhausted at night, falls asleep easily but wakes up at in early a.m. and can’t
get back to sleep. Bedtime at 12 (stays up to see wife)
Wakes up at 2 a.m, sometimes again around 4; up for an hour
Up at 6 (to get daughter off to school)

Other medical issues: asthma; knee not hurting at night, but unable to exercise like he
used to (was in basketball league, played several times a week)

What other symptoms do you look for?

Current exercise: housework
Diet: snack with wife at 11:30 pm. Coffee in morning and diet coke at lunch, dinner.
Alcohol: sometimes has a beer with 11:30 snack
Smoking: none

Environment: TV in bedroom; wife sometimes watches quietly at bedtime

Behaviors:
When wakeful, goes into other room to watch ESPN or goes online
Frets about tasks he has to do for job hunting and house
Sometimes takes a nap at 4 after wife leaves for work

Attitudes:
Worried he’ll get sick from lack of sleep; about finding a job, how can he function if he’s not
sleeping; worries about finances though family is doing OK

Sleep diary: 4.5 6 hours in bed (efficiency 75%)

What are the key elements of your treatment approach?
- Environment, lifestyle factors
- Stimulus control
- Cognitive restructuring
- Relaxation
68 year old woman, taking benzodiazepine for sleep

Cc: “I’ve had to take this pill to sleep since my husband died.” Never a good sleeper. Widowed 5 years ago, persistent insomnia started then. Transient depression, treated with citalopram; stopped 2 years ago.

Sleep history: Falls asleep easily with medication and usually sleeps through the night; slow getting going in the morning

Other medical issues: osteoarthritis of hip, hypertension.
Meds: HCTZ, lisinopril, occasional ibuprofen

What other symptoms do you look for?

Current exercise: does own housework, swims twice a week
Diet: coffee in morning, sometimes tea in afternoon
Alcohol: has a glass of wine socially
Smoking: none

Environment: keeps her house and bedroom warm
Behaviors: takes temazepam 15 mg at bedtime every night

Attitudes: doesn’t like taking sleeping pill, but resigned to it. Feels she can’t sleep without it

Sleep diary: 7 h 8.5 hours in bed (efficiency 82%)

What are the key elements of your treatment approach?
- Environment, lifestyle factors
- Stimulus control
- Cognitive restructuring
- Relaxation
- Medication
TREATMENT OF INSOMNIA IN PRIMARY CARE:
REFERENCES

General reviews:


Cognitive-behavioral therapy


Edinger JD, Sampson WS. A primary care “friendly” cognitive behavioral insomnia therapy. Sleep 2003;26:177-82.


Instructions for Reducing and Eliminating Use of Sleeping Pills

First put into action the methods for improving sleep that you have discussed with the doctor. Then make a plan to gradually reduce the dose of sleeping pills. Choose a time when you are not under unusual stress.

1. Cut the dose of medication in half ONE NIGHT per week. Choose a night before the weekend, or before another day when you will be under less pressure than usual.

2. After a week, when you are sleeping reasonably well, cut the dose of medication in half TWO NIGHTS per week. Space the nights out and choose days when you will be under less pressure than usual, if possible.

3. Gradually reduce to one half the starting dose by ONE NIGHT PER WEEK, until you are taking a half-dose every night. If you feel you need to go back to a higher dose, do not do so; instead, call the doctor for advice.

4. After you are taking a half-dose every night for a few weeks and sleeping okay, eliminate the pill altogether one night per week. Again, choose an “easy” night before the weekend or a day when you expect less pressure than usual.

5. Continue to gradually reduce the dose by skipping the pill two nights per week, then three nights, until you have stopped using the sleeping pill.

6. If at any point you are having problems continuing to gradually reduce the dose, first make sure you are practicing the methods you learned for improving sleep. If you are doing so and still are unable to continue reducing the dose, call the doctor for advice.

Adapted from Gregg Jacobs, PhD
ANSWERS TO INSOMNIA CASES

Case 1.
Key history points: symptoms of depression, hypothyroidism, menopause, sleep apnea

Key elements of treatment:
- Environment, lifestyle – eliminate afternoon caffeine; increase exercise (e.g. walk at lunch every day); earplugs or white noise; ?light bedtime snack
- Stimulus control – avoid sleep during TV; stay active in evening, lights up; out of bed if wakeful; consider formal sleep restriction; get up around 7 every day even weekend
- Cognitive – explain main effect of sleep loss on mood, not performance; positive reinforcement of small changes she is able to make to increase sense of control
- Relaxation – try relaxation tape, use if wakeful

Case 2.
Key history points: symptoms of anxiety disorder or depression; pain; asthma control

Key elements of treatment:
- Environment, lifestyle – try for enjoyable exercise 1-2 d/week; eliminate diet coke; lite beer or none at 11:30 pm; eliminate bedroom TV
- Stimulus control – get up but don’t watch TV/use computer when wakeful; structure in “worry time”
- Cognitive restructuring – help increase healthy behaviors (e.g. exercise), give realistic context for effect of sleep disturbance, increase sense of control, help reframe financial and job worries
- Relaxation – try relaxation/breathing exercise instead of nap in afternoon

Case 3.
Key history points: RLS symptoms, depression, cognitive impairment

Key elements of treatment:
- Environment, lifestyle – increase exercise (?stretching/yoga/water-based) to more days/week; eliminate afternoon tea; reduce alcohol
- Stimulus control – sleep efficiency OK (80% acceptable in elderly); cool bedroom
- Cognitive restructuring – educate on drawbacks of benzo with aging
- Relaxation – experiment
- Medication – after dealing with above, institute medication taper; consider substitution of low-dose antidepressant at bedtime