Insomnia: When You Just Can't Sleep on It

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Disclosure

I have no financial interests or relationships to disclose.

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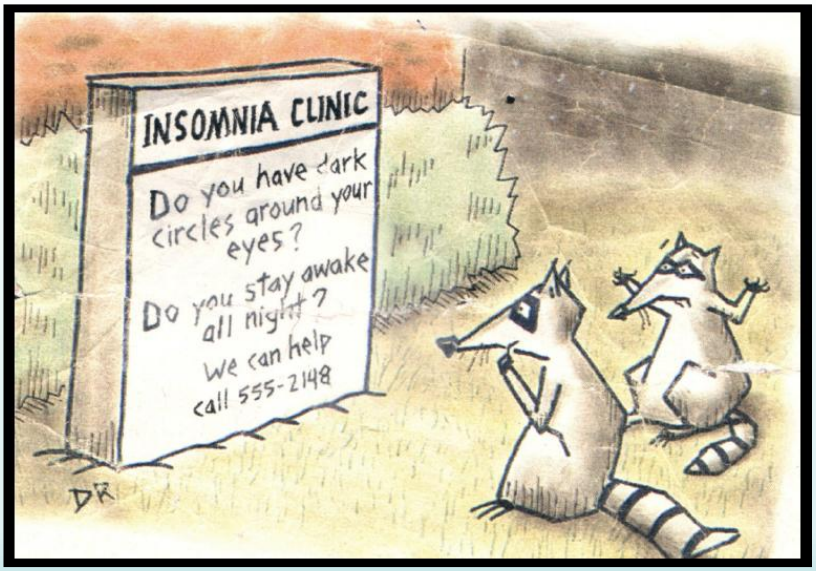
Insomnia



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How Many of You Have a Sleep Specialist That You Can Refer to in Your Practice?

A. I have a sleep specialist
B. I do not have a sleep specialist

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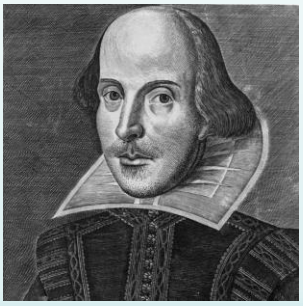
Insomnia

Oh sleep, Oh gentle sleep,
Nature's soft nurse How have I frighted thee?
That though no more will weigh mine eyelids down
And sleep my senses in forgetfulness?



Henry IV, William Shakespeare

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1) Sleep changes with normal aging

2) Insomnia

-Pathophysiology

-Management

-Behavioral

-Medication

3) Circadian Rhythm

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Normal Aging

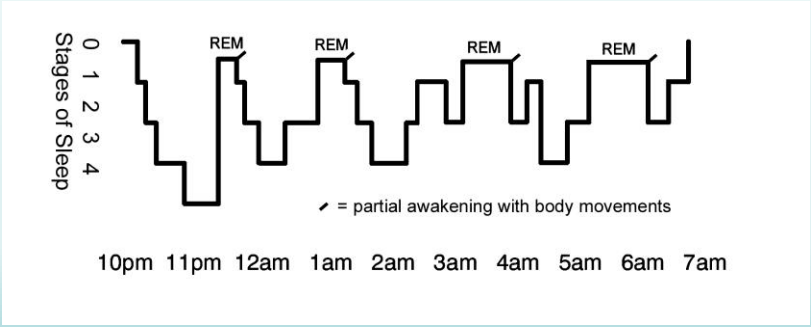
Stages of Sleep

N1 – transition

N2 – light sleep

N3 – physically restorative sleep

R – mentally restorative sleep (REM)



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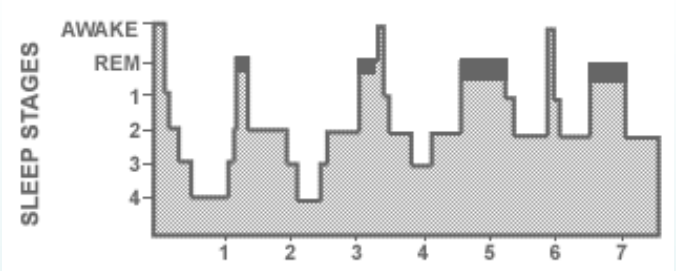
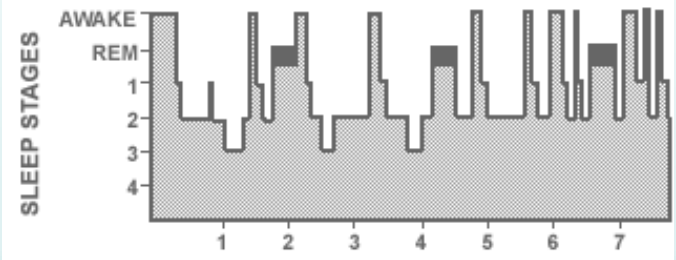
Before Residency



After Residency



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Normal Aging

Most of these changes occur by the age of 40 or 50

Sleep remains pretty constant from age 60-90 except for..

Sleep efficiency decreases steadily from 95% to 80% as one ages to 80 years old

Middle Age:

-increased awakenings, arousals, and stage shifts

-decreased N3

-reduced sleep efficiency

-phase advancement (go to and get up from bed earlier)

-resistance to sleepiness and sleep deprivation

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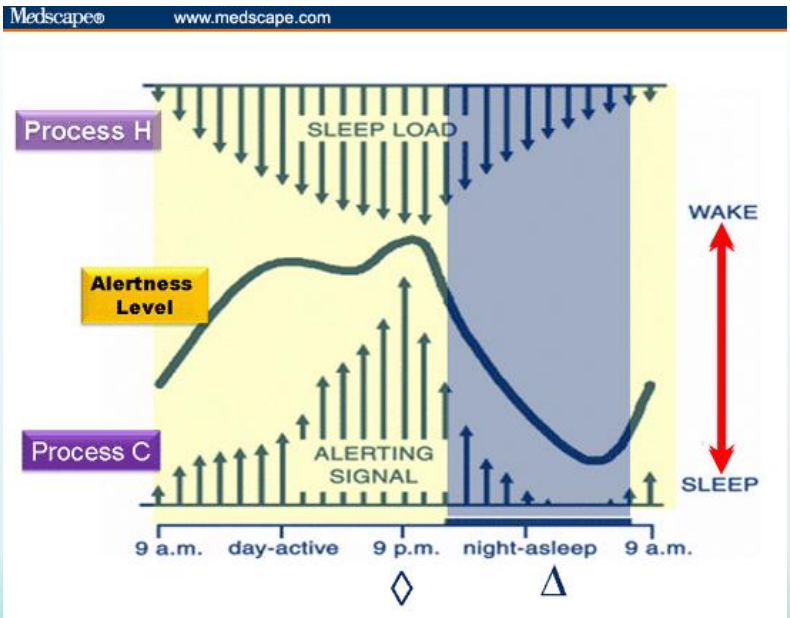
Normal Aging



DLMO Temp nadir

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Normal Aging

Bottom Line:

As you get older you go to sleep earlier and wake up earlier

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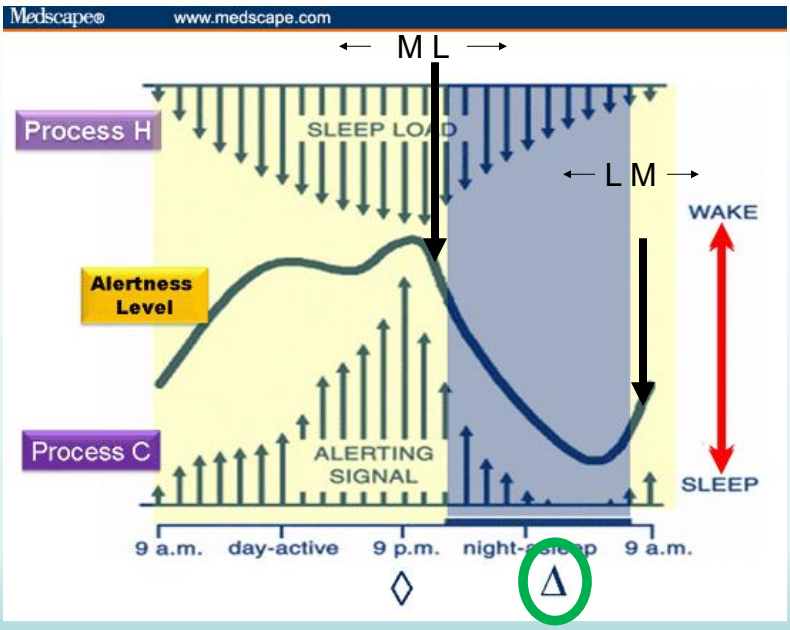
Normal Aging



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Insomnia

Insomnia increases as we age

- -18-34 years = 14%
- -35-49 years = 15%
- -50-64 years = 20%
- -65-79 years = 25% *

Older Adults (mean age = 74 years)

- -waking too early = 19%
- -trouble falling asleep = 19%
- -daytime napping = 25%
- -insomnia = 29%
- -both initiating/maintaining sleep = 43%

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Insomnia

What are the factors contributing to insomnia in the elderly?

- -medical illness (getting up to urinate)
- -psychiatric illness (depression)
- -medication/polypharmacy
  - -alcohol, caffeine, nicotine,
  - -BP meds, decongestants, psych meds
  - -antihistamines, antidepressants (during day)
- -circadian rhythm disturbances
  - -going to bed too early and get up too early
  - -not enough light exposure (no circadian rhythm)
- -primary sleep disorders

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Insomnia

Treatment is individualized depending on what type of Insomnia is seen:

-for patient with insomnia the cause was found to be:
- -35% **psychiatric illness (depression)**
- -15% **psychophysiological** (performance anxiety)
- -12% **drug and ETOH dependency**
- -12% **RLS**
- -10% **circadian rhythm sleep disorder**
- -9% **paradoxical sleep disorder (not a problem)**

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Insomnia

Hard to go to sleep… or Hard to stay asleep…

3Ps

-**predisposing factors** – biological, genetic, worrying

-**precipitating factors** – environment, stress,

-**perpetuating factors** – behaviors adopted by patient that *works against them* (see Sleep Hygiene)

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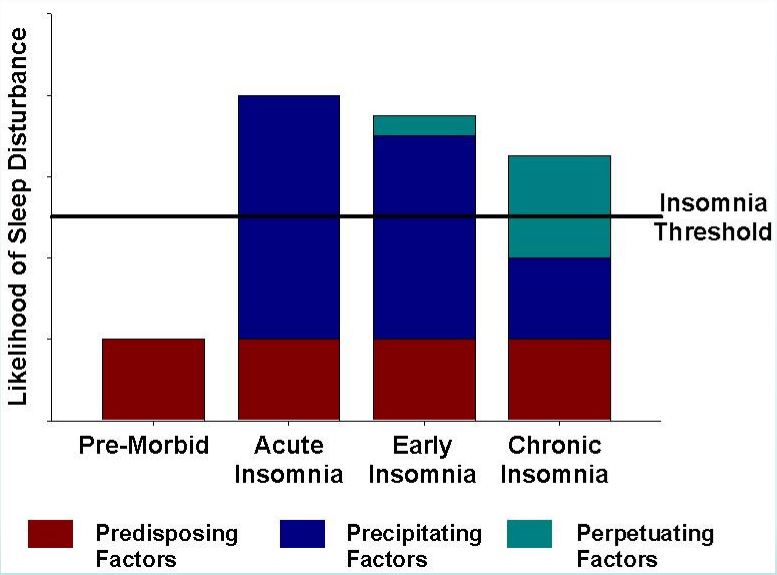
Insomnia



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Insomnia

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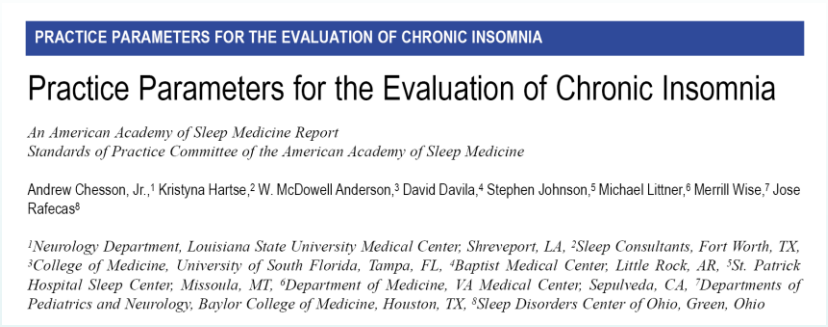
Insomnia



PRACTICE PARAMETERS FOR THE EVALUATION OF CHRONIC INSOMNIA

Practice Parameters for the Evaluation of Chronic Insomnia

An American Academy of Sleep Medicine Report
Standards of Practice Committee of the American Academy of Sleep Medicine

Andrew Chesson, Jr.,[1] Kristyna Hartse,[2] W. McDowell Anderson,[3] David Davila,[4] Stephen Johnson,[5] Michael Littner,[6] Merrill Wise,[7] Jose Rafecas[8]

[1]Neurology Department, Louisiana State University Medical Center, Shreveport, LA, [2]Sleep Consultants, Fort Worth, TX, [3]College of Medicine, University of South Florida, Tampa, FL, [4]Baptist Medical Center, Little Rock, AR, [5]St. Patrick Hospital Sleep Center, Missoula, MT, [6]Department of Medicine, VA Medical Center, Sepulveda, CA, [7]Departments of Pediatrics and Neurology, Baylor College of Medicine, Houston, TX, [8]Sleep Disorders Center of Ohio, Green, Ohio

Recommendations:

1) Screen for Insomnia during health examinations
2) In-dept History and Physical is important if insomnia is found (more)
3) May need to use PSG but do not use routinely
4) Instruments such as questionnaires, logs, checklists may be helpful

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Insomnia

Symptoms to screen for:

-heightened arousal – assoc with insomnia

-depression, anxiety, OCD

-restless leg syndrome (U.R.G.E.)

-sleep/wake schedule disorders

-snoring or other symptoms of OSA

-drug or alcohol abuse

-current medication use

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Insomnia

General Approach:

-treat any medical or psychiatric illness, substance disorder or sleep disorder found

-counsel on sleep hygiene and stimulus control (BT)

-what about medication – first off?

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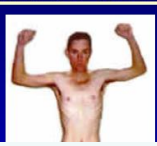
IS THIS AN ACCURATE REPRESENTATION ?



MEDICAL TX FOR INSOMNIA

CBT TX FOR INSOMNIA

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Insomnia

General Approach:

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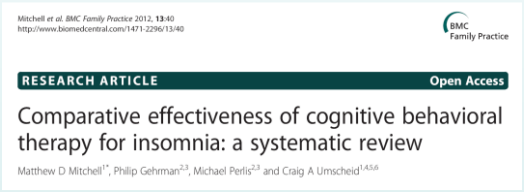
-counsel on sleep hygiene and stimulus control (BT)

-what about medication – first off?


Mitchell et al. BMC Family Practice 2012, 13:40
http://www.biomedcentral.com/1471-2296/13/40

BMC Family Practice

RESEARCH ARTICLE Open Access

Comparative effectiveness of cognitive behavioral therapy for insomnia: a systematic review

Matthew D Mitchell[1*], Philip Gehrman[2,3], Michael Perlis[2,3] and Craig A Umscheid[1,4,5,6]

"CBT-I is at least as effective for treating insomnia when compared with sleep medications, and its effects may be more durable than medications."

Qaseem A, Kansagara D, Forciea MA, Cooke M, Denberg TD; Clinical Guidelines Committee of the American College of Physicians. Management of Chronic Insomnia Disorder in Adults: A Clinical Practice Guideline From the American College of Physicians. Ann Intern Med. 2016 Jul 19;165(2):125-33. doi: 10.7326/M15-2175. Epub 2016 May 3. PMID: 27136449.

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Insomnia

Sleep Hygiene	Stimulus Control
1) Sleep until rested then get up	1) Go to bed only when sleepy
2) Keep a regular sleep schedule	2) Use bed for sleep and sex only! -no television, reading, eating
3) Do not force sleep	
4) Exercise regularly for 20 min, 4-5 hours before bedtime	3) Get out of bed if not able to sleep in 20 minutes -return to bed only when sleepy -repeat as many times as nec.
5) Avoid caffeinated drinks in afternoon	
6) Avoid ETOH at bedtime	4) Wake up at same time each day -use an alarm clock if nec.
7) Avoid smoking in PM	
8) Do not go to bed hungry	5) No napping
9) Adjust bedroom environment	
10) Deal with worries before bedtime	

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POOR STIMULUS CONTROL

GOOD STIMULUS CONTROL

ODDS 1 IN 2

BEDROOM
BEDTIME

SEX

SLEEP

STIMULUS DYSCONTROL

ODDS 1 IN 8

EATING IN BED

READING IN BED

WATCHING TV IN BED

BEDROOM
BEDTIME

SEX

SLEEP

WORKING IN BED

WORRYING IN BED

CLEANING BDRM

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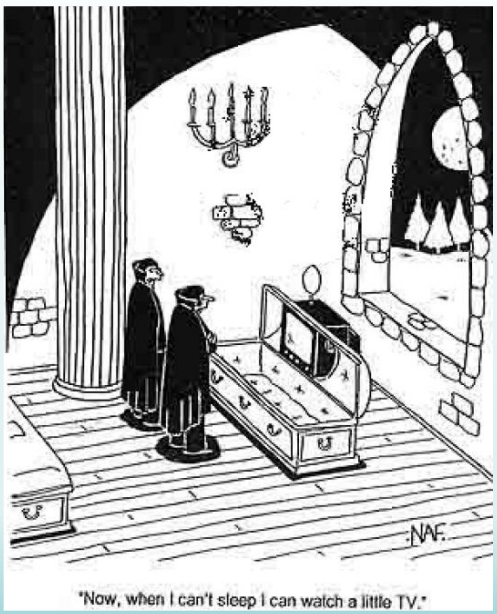
Insomnia



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Insomnia

"I couldn't sleep."

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Insomnia

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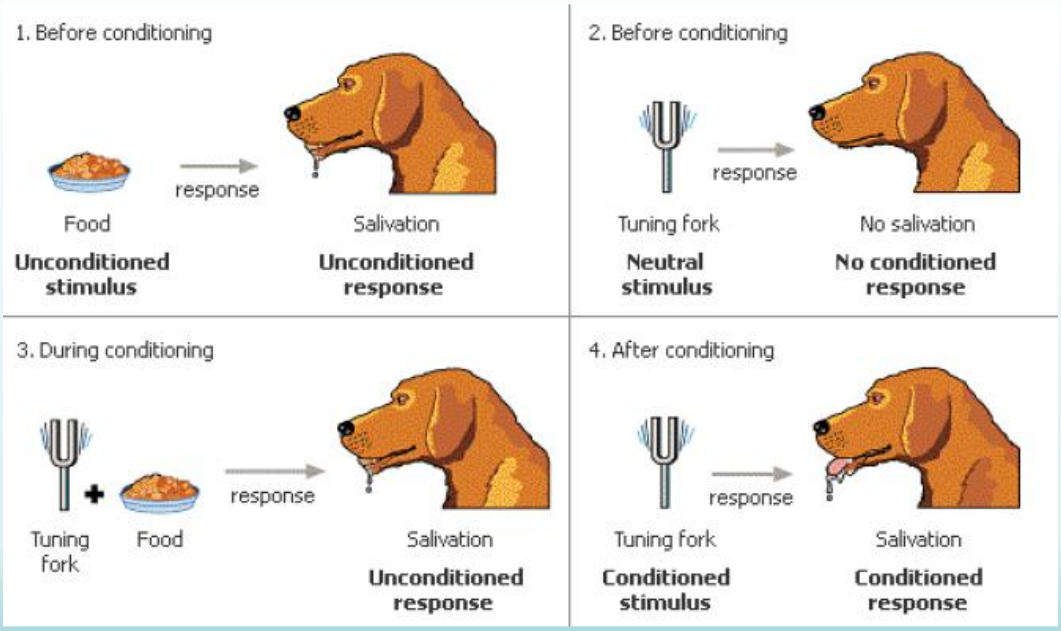
Insomnia



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Insomnia

Flow chart:

General Approach

Look for diseases

Do Hygiene and Stimulus

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Insomnia

For patients that continue to have insomnia:

Behavioral Therapy (in addition to Sleep Hygiene and Stimulus Control)	Medications
1) Relaxation	1) Benzodiazepines
2) Sleep restriction Therapy	2) Nonbenzodiazepines sedatives
3) Cognitive Therapy	3) Melatonin agonists
4) Cognitive – Behavioral Therapy	4) Antidepressants/others

AND/OR

Medications for 6-8 weeks – then taper

Use of meds before behavioral therapy is less effective* - unless short term stressor

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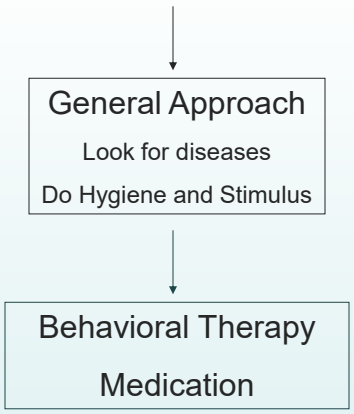
Insomnia

Flow chart:



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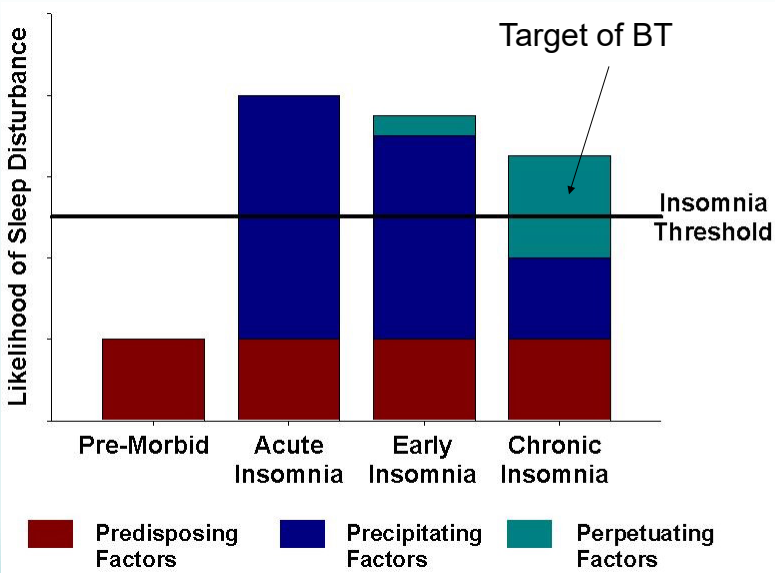
Insomnia



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Insomnia

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Relaxation Therapy

Progressive relaxation	Relaxation Response
-relax one muscle at a time until the whole body is relaxed	-lying down, close eyes -allow relaxation to spread throughout entire body
-start in face: contract muscles for 1-2 sec	-turn thoughts to more peaceful things
-repeat for 45 minutes	

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Insomnia

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Sleep Restriction Therapy (de-fragmentation therapy)

-insomnia → stay in bed longer → circ shift & ↓ homeostatic drive (vicious cycle)

-purpose is to increase sleep drive and consolidate sleep and sleep efficiency

-add up all fragments (no less than 5 h) and count back from target wake time

-patient is allowed to go to bed only at that time until sleep efficiency > 85%

-once this happens, patient allowed to go to bed 15 minutes earlier until > 85%

-keep going back until excessive daytime sleepiness improves

-NO NAPPING.

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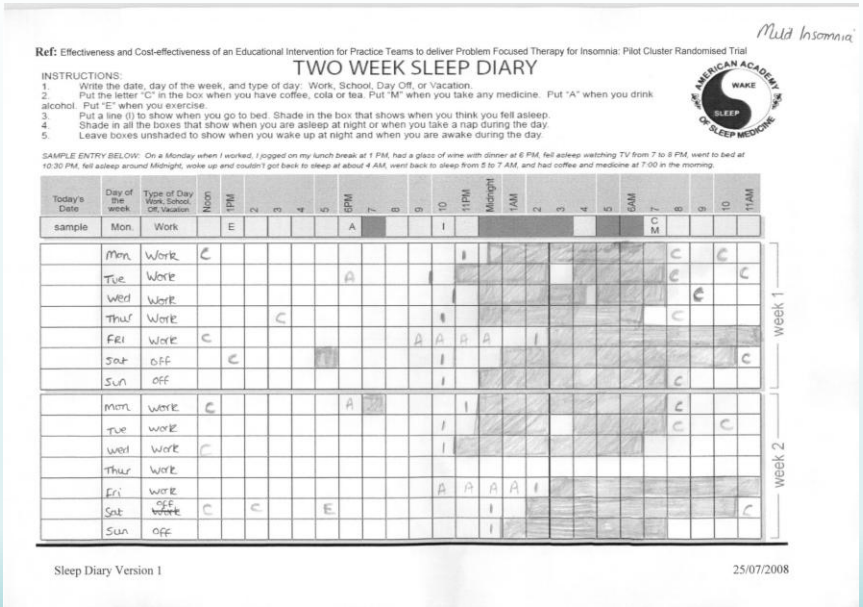
Insomnia


Mild Insomnia

Ref: Effectiveness and Cost-effectiveness of an Educational Intervention for Practice Teams to deliver Problem Focused Therapy for Insomnia: Pilot Cluster Randomised Trial

TWO WEEK 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 (|) to show when you go to bed. Shade in 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.

AMERICAN ACADEMY OF SLEEP MEDICINE — WAKE / SLEEP

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 Work, School, Off, Vacation	Noon	1PM	2	3	4	5	6PM	7	8	9	10	11PM	Midnight	1AM	2	3	4	5	6AM	7	8	9	10	11AM
sample	Mon.	Work		E					A				I									C M				
	Mon.	Work	C										I									C		C		
	Tue.	Work							A				I									C				C
	Wed	Work											I										C			
	Thur	Work				C							I									C				
	Fri	Work	C									A	A	A	A		I									
	Sat	OFF		C									I													C
	Sun	OFF											I									C				
	Mon.	Work	C						A					I								C				
	Tue	Work											I									C		C		
	Wed	Work	C										I													
	Thur	Work																								
	Fri	Work											A	A	A	A	I									
	Sat	OFF	C		C			E						I												C
	Sun	OFF												I												

week 1 — week 2

Sleep Diary Version 1 25/07/2008

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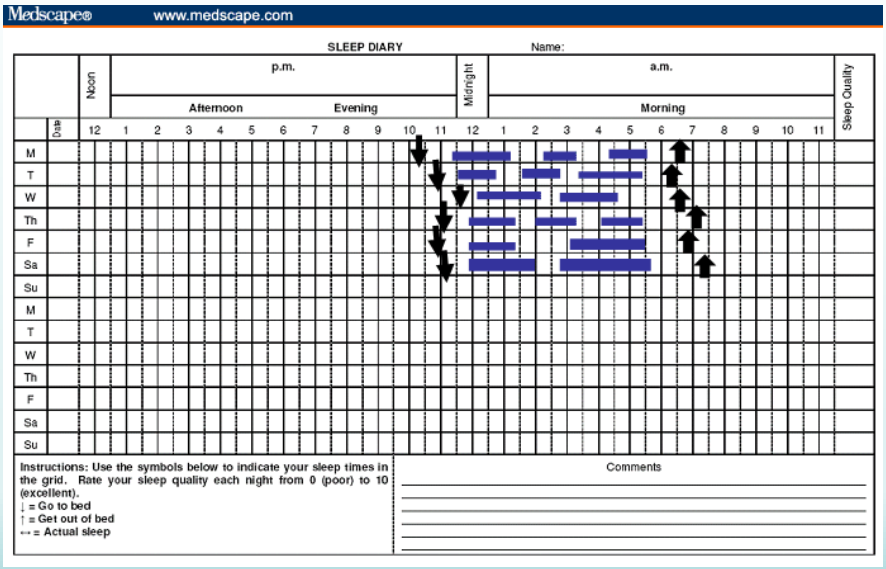
Insomnia



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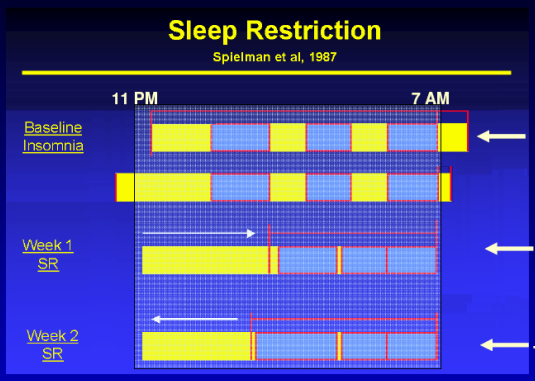
SLEEP RESTRICTION



TST = 5 hrs TIB = 8.0 hrs SE% = 62.5

PTIB = 5.0 hrs TST = 4.75 hrs SE% = 95.0

+ 15 Min. PTIB = 5.25 hrs

-Restrict to the number of hours in bed = average TST

-5 Hours should be the minimum

-PTTB and PTOB are inflexible

-Review ways to stay awake

-Keep diary

-Titration based on diary data (85% or more versus less)

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Insomnia

Behavioral Therapy (in addition to Sleep Hygiene and Stimulus Control)	Medications
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4) Cognitive – Behavioral Therapy	4) Antidepressants/others

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-purpose is to increase sleep drive and consolidate sleep and sleep efficiency

-add up all fragments (no less than 5 h) and count back from target wake time

-patient is allowed to go to bed only at that time until sleep efficiency > 85%

-once this happens, patient allowed to go to bed 15 minutes earlier until > 85%

-keep going back until excessive daytime sleepiness improves

-must monitor these patient very carefully for sleep deprivation.[1]

1) Kyle DS et al. Sleep restriction therapy for insomnia is associated with reduced objective total sleep time, increased daytime somnolence, and objectively impaired vigilance: implications for the clinical management of insomnia disorder. Sleep 2014; 37:229

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Insomnia

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Cognitive Therapy

-prevent people from making a mountain out of a molehill

-catastrophic thinking

-establishing realistic expectations

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Insomnia

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1) Relaxation	1) Benzodiazepines
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Cognitive-Behavioral Therapy

-combination of the preceding

-education, stimulus control, sleep restriction, cognitive therapy, sleep hygiene

-provides patients tools for the future

-very few can do a good job

-proven effective[1] to improve sleep quality and decrease awake time during the night.[2]

1) NIH State of the Science Conference statement on Manifestations and Management of Chronic Insomnia in Adults, June 13-15, 2005. Sleep 2005; 28:1049

2) McCurry SM, et al. Evidence-based psychological treatments for insomnia in older adults. Psychol Aging 2007; 22:18

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Insomnia

Medications

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Insomnia

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Insomnia

Behavioral Therapy (in addition to Sleep Hygiene and Stimulus Control)	Medications
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Medications – in general

-usual improvement in daytime function, better QOL, few comorbidities

-risks include side effects and addiction with long term use

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Insomnia

Risks go up in

- -pregnancy: fetal malformations
- -alcohol consumption
- -kidney disease, liver, or pulmonary disease
- -sleep apnea
- -nighttime decision makers*
- -elderly (75+ years)

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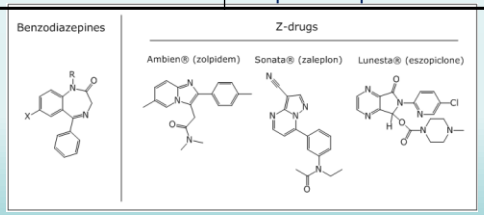
Insomnia

	Medications
WHICH ONE DO I CHOOSE? Has to do with what type of insomnia. Sleep onset or maintenance?	1) Benzodiazepines
	2) Nonbenzodiazepines sedatives
	3) Melatonin agonists
	4) Antidepressants/others

Benzodiazepines	Nonbenzodiazepines
Binds to several $GABA_A$ receptors (**longer**) ↓SL, ↑N2, ↑TST, ↓ REM, impair memory ↓anxiety, anticonvulsant -SE: daytime sleepiness, motor, cognitive, dependence, complex sleep-related behaviors	Targets $GABA_A$ receptor **specifically** ↓SL, ↑N2, ↑TST, ↓ REM, impair memory **Less** ↓ anxiety, **less** anticonvulsant -SE: **less** daytime sleepiness, motor, cognitive, dependence, complex sleep-related behaviors

triazolam (Halcion)
estazolam (ProSom)
lorazepam (Ativan)
temazepam (Restoril)
flurazepam (Dalmane)
quazepam (Doral)



zolpidem (Ambien) $t_{1/2}$ = **2h***
zolpidem (Ambien-CR) $t_{1/2}$ = **2h****
zaleplon (Sonata) $t_{1/2}$ = **1h**
eszopiclone (Lunesta) $t_{1/2}$ = **6h**

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Insomnia

Risk of next-morning impairment after use of insomnia drugs; FDA requires lower recommended doses for certain drugs containing zolpidem (Ambien, Ambien CR, Edluar, and Zolpimist)

Safety Announcement

[1-10-2013] The U.S. Food and Drug Administration (FDA) is notifying the public of new information about zolpidem, a widely prescribed insomnia drug. FDA recommends that the bedtime dose be lowered because new data show that blood levels in some patients may be high enough the morning after use to impair activities that require alertness, including driving. Today's announcement focuses on zolpidem products approved for bedtime use, which are marketed as generics and under the brand names Ambien, Ambien CR, Edluar, and Zolpimist.

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Insomnia

FDA warning 1/2013:

Zolpidem (Ambien)

-recommend use of a lower dose in women than previously recommended, consider this also in men

Zolpidem (Ambien CR)

-recommend use of a lower dose in women then previously recommended, consider this also in men

-"patients should not drive or engage in other activities that require complete mental alertness the day after taking zolpidem extended release because zolpidem levels can remain high enough the next day to impair these activities."

Since **2019**, the FDA required a **Boxed Warning** for **serious injuries from complex sleep behaviors** (e.g., sleepwalking/sleep driving) for **zolpidem, zaleplon, eszopiclone**.

1) http://www.fda.gov/Drugs/DrugSafety/ucm352085.htm

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Insomnia

	Medications
WHICH ONE DO I CHOOSE? Has to do with what type of insomnia. Sleep onset or maintenance?	1) Benzodiazepines
	2) Nonbenzodiazepines sedatives
	3) Melatonin agonists
	4) Antidepressants/others

Melatonin agonists ramelteon (Rozerem)

-bind to M receptors tighter than melatonin ($t_{1/2}$ = 1.5-5 hours)

-better for sleep onset insomnia (give 30 minutes before bedtime)

-fewer side effects then B or NB; no hypnotic SE (next day)

-cleared through the liver, contraindicated with fluvoxamine

-not habit forming!!!

-may ↑prolactin and ↓testosterone (don't need to monitor unless symptoms)

-not a scheduled drug with the FDA

-↓SL by 10-15 minutes, ↑TST by 10-15 minutes – lasted for up to 1 year or more

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Insomnia

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Antidepressants (doxepin, amitriptyline, trazadone)

-Doxepin: only 3 and 6 mg dose is FDA approved

-amitriptyline and trazadone (antihistamine, anticholinergic effects)

-use in depressed patients with insomnia

-not depressed?

doxepin 3 mg versus placebo: ↓WASO, ↑TST, ↑Sleep efficiency, ↑Sleep quality

trazadone versus zolpidem: no difference[1]

-the routine use of sedating antidepressants other than low dose doxepin is not recommended due to side effects

1) Walsh et al. Subjective hypnotic efficacy of trazadone and zolpidem in DSM-III-R primary insomnia. Hun Psychopharmacol 1998; 13:191

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Insomnia

	Medications
WHICH ONE DO I CHOOSE? Has to do with what type of insomnia. Sleep onset or maintenance?	1) Benzodiazepines
	2) Nonbenzodiazepines sedatives
	3) Melatonin agonists
	4) Antidepressants/others

Others

-Belsomra (suvorexant) -FDA approved in late 2014

-targets and inhibits the orexin pathway

-improves sleep onset and staying asleep

-20 mg dose especially associated with driving difficulties the next day

-no dependence and no withdrawal symptoms possible abuse addiction (schedule IV)

1) Walsh et al. Subjective hypnotic efficacy of trazadone and zolpidem in DSM-III-R primary insomnia. Hun Psychopharmacol 1998; 13:191

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Orexin Inhibitors

daridorexant (QUVIVIQ) — FDA approval effective **Jan 7, 2022**; indicated for adult insomnia with difficulty **sleep onset and/or sleep maintenance**.
Controlled substance: **Schedule IV**

lemborexant (DAYVIGO) — FDA approval effective **Dec 20, 2019**; indicated for adult insomnia with difficulty **sleep onset and/or sleep maintenance**.
Controlled substance: **Schedule IV**.

suvorexant (BELSOMRA) — FDA approval date **Aug 13, 2014**; indicated for insomnia with difficulty **sleep onset and/or sleep maintenance**.
Controlled substance: **Schedule IV**.

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Insomnia

	Medications
WHICH ONE DO I CHOOSE? Has to do with what type of insomnia. Sleep onset or maintenance?	1) Benzodiazepines
	2) Nonbenzodiazepines sedatives
	3) Melatonin agonists
	4) Antidepressants

Not recommended[1]

-Diphenhydramine – no evidence it improves insomnia, next day SE –alertness, cognitive, dry mouth

-Antipsychotics – few trials and many SE

-Barbiturates - few trials and many SE

-Over the Counter

-Valerian - ↓SL < 1 min, hepatic SE, no regulation

-Melatonin – works in delayed sleep phase syndrome and low melatonin levels**

-Alcohol – short term ↓SL. Promotes sleep disturbance later in the night, OSA, dependence, interaction with other meds.

1) Sateia MJ, Buysse DJ, Krystal AD, Neubauer DN, Heald JL. **Clinical Practice Guideline for the Pharmacologic Treatment of Chronic Insomnia in Adults: An American Academy of Sleep Medicine Clinical Practice Guideline.** *J Clin Sleep Med.* 2017 Feb 15;13(2):307-349. doi:10.5664/jcsm.6470. PMID:27998379. PMCID:PMC5263087.

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Insomnia

More about Side effects:

Older adults:

-in 60 years plus pharmacotherapy:

-↑sleep quality, ↑TST, ↓freq awakening[1]

-↑2-5x adverse cognitive or psychomotor events (falls, fractures)

Mortality:

-observational studies connect sedative hypnotics and all-cause mortality!

-OR: 1.1 – 4.5!!!!

-other studies than adjusted for confounders did not

-need prospective study to look as causality

1) Glass et al. Sedative hypnotics in older people with insomnia: meta-analysis of risks and benefits. BMJ 2005; 331:1169.

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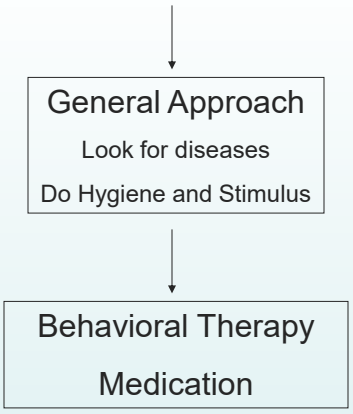
Insomnia

Flow chart:



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Insomnia

Behavioral Therapy (in addition to Sleep Hygiene and Stimulus Control)	Medications
1) Relaxation	1) Benzodiazepines
2) Sleep restriction Therapy	2) Nonbenzodiazepines sedatives
3) Cognitive Therapy	3) Melatonin agonists
4) Cognitive – Behavioral Therapy	4) Antidepressants

Combination Therapy

-CBT + Medication for 6-8 weeks

-taper the medication and continue the CBT

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Insomnia

Study: Morin et el.

ORIGINAL CONTRIBUTION

Cognitive Behavioral Therapy, Singly and Combined With Medication, for Persistent Insomnia

A Randomized Controlled Trial

Charles M. Morin, PhD
Annie Vallières, PhD
Bernard Guay, MD
Hans Ivers, PhD
Josée Savard, PhD
Chantal Mérette, PhD
Célyne Bastien, PhD
Lucie Baillargeon, MD

Context Cognitive behavioral therapy (CBT) and hypnotic medications are efficacious for short-term treatment of insomnia, but few patients achieve complete remission with any single treatment. It is unclear whether combined or maintenance therapies would enhance outcome.

Objectives To evaluate the added value of medication over CBT alone for acute treatment of insomnia and the effects of maintenance therapies on long-term outcome.

Design, Setting, and Patients Prospective, randomized controlled trial involving 2-stage therapy for 160 adults with persistent insomnia treated at a university hospital sleep center in Canada between January 2002 and April 2005.

(Reprinted) JAMA, May 20, 2009—Vol 301, No. 19 **2005**

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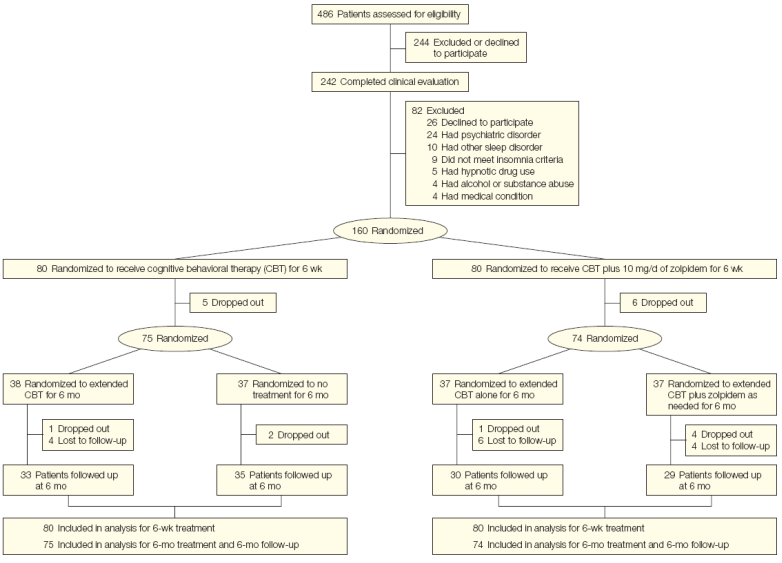
Insomnia

Figure 1. Flow of Patients in Trial



(Reprinted) JAMA, May 20, 2009—Vol 301, No. 19 **2007**

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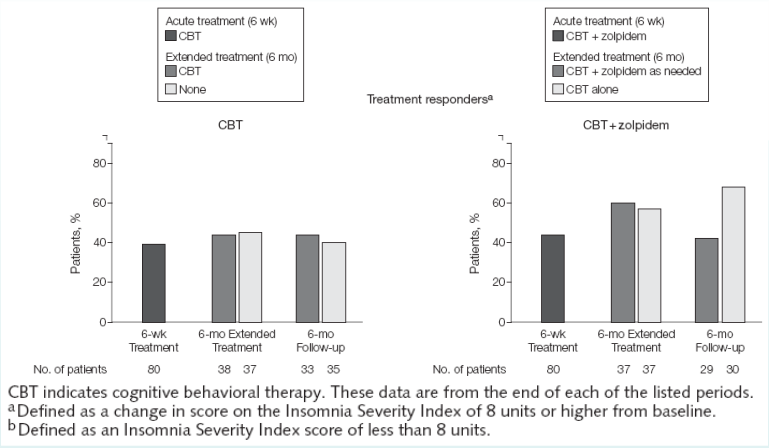
Insomnia



CBT indicates cognitive behavioral therapy. These data are from the end of each of the listed periods.
[a]Defined as a change in score on the Insomnia Severity Index of 8 units or higher from baseline.
[b]Defined as an Insomnia Severity Index score of less than 8 units.

Combination Therapy

-CBT + Medication for 6-8 weeks

-taper the medication and continue the CBT

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Insomnia

Flow chart:

General Approach

Look for diseases

Do Hygiene and Stimulus

↓

Behavioral Therapy

Medication (6 wks)

↓

Sleep Specialist?

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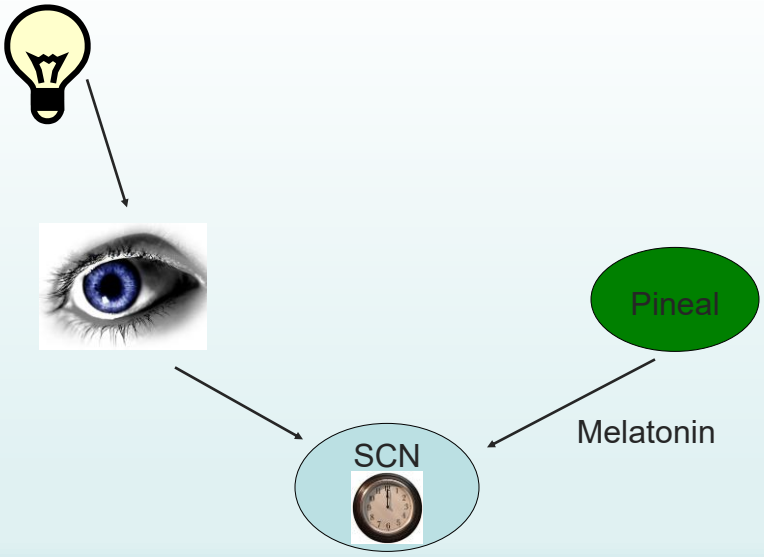
Insomnia



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Insomnia

Circadian Rhythm Facts:

-body temperature, melatonin secretion, sleep onset and waking up are all on the clock and related to each other

2100 – Dim light melatonin onset (DLMO)

2300 – Go to Sleep

0500 – Core body temperature nadir

8 hours

0700 – wake up

-light exposure after nadir *advances* rhythm (1-2 h before wake)

-light exposure before nadir *delays* rhythm (2h before sleep)

-melatonin administration 5-7 hours before sleep time *advances* rhythm

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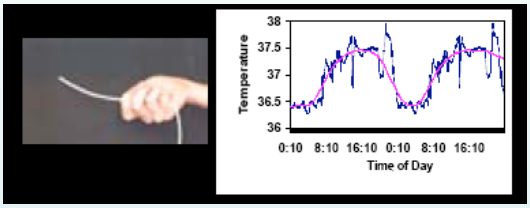
Insomnia

Things to measure:

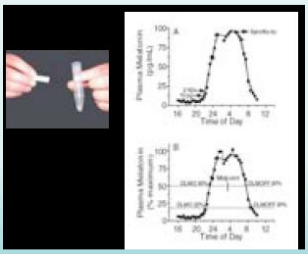
1) Questionnaire

2) Sleep diary / actigraphy for at least 7 days

3) Core body temperature



4) Melatonin levels



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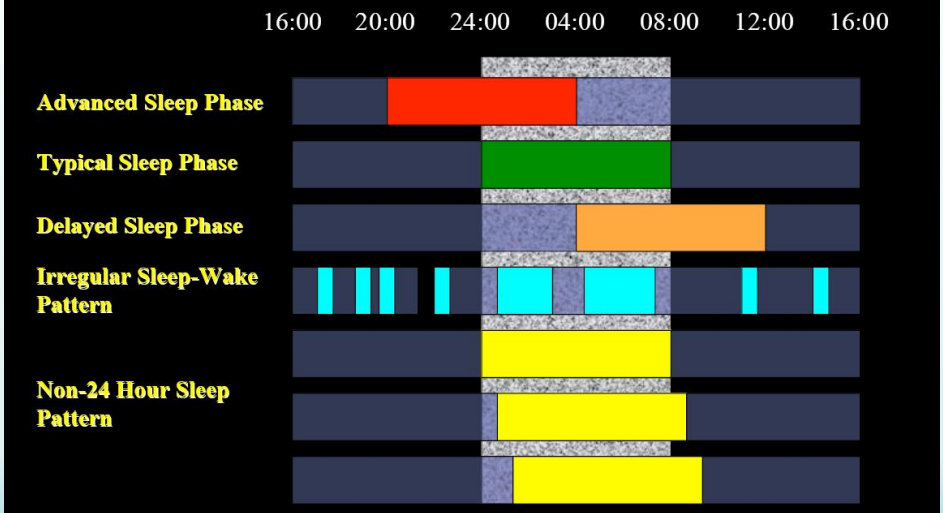
Circadian Sleep Disorders



American Academy of Sleep Medicine. *International Classification of Sleep Disorders*. 3rd ed. Text Revision. Darien, IL: American Academy of Sleep Medicine; 2023.

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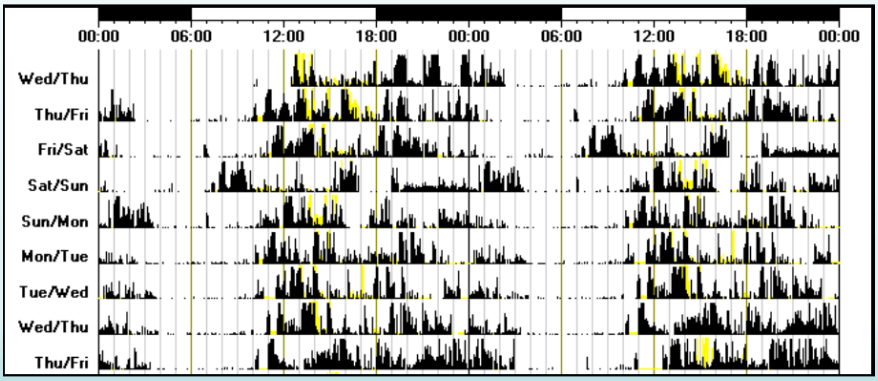
Insomnia

Delayed Sleep Phase

-22-year-old female medical student can't fall asleep until 3AM with difficulty waking up in the morning.

-struggled through college to make it to morning classes

-zolpidem helps only intermittently



Swanson LM, de Sibour T, DuBuc K, et al. Low-dose exogenous melatonin plus evening dim light and time in bed scheduling advances circadian phase irrespective of measured or estimated dim light melatonin onset time: preliminary findings. *J Clin Sleep Med*. 2024;20(7):1131-1140. doi:10.5664/jcsm.11076

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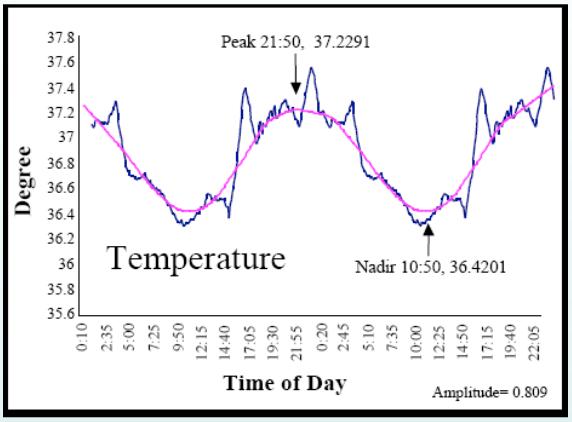
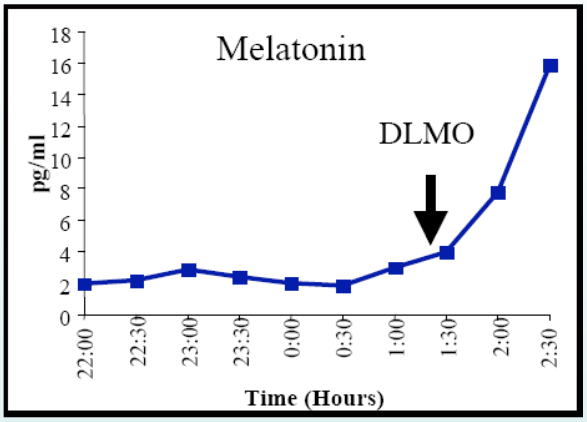
Insomnia





Kennaway DJ. The dim light melatonin onset across ages, methodologies, and sex and its relationship with morningness/eveningness. *Sleep*. 2023;46(5):zsad033. doi:10.1093/sleep/zsad033

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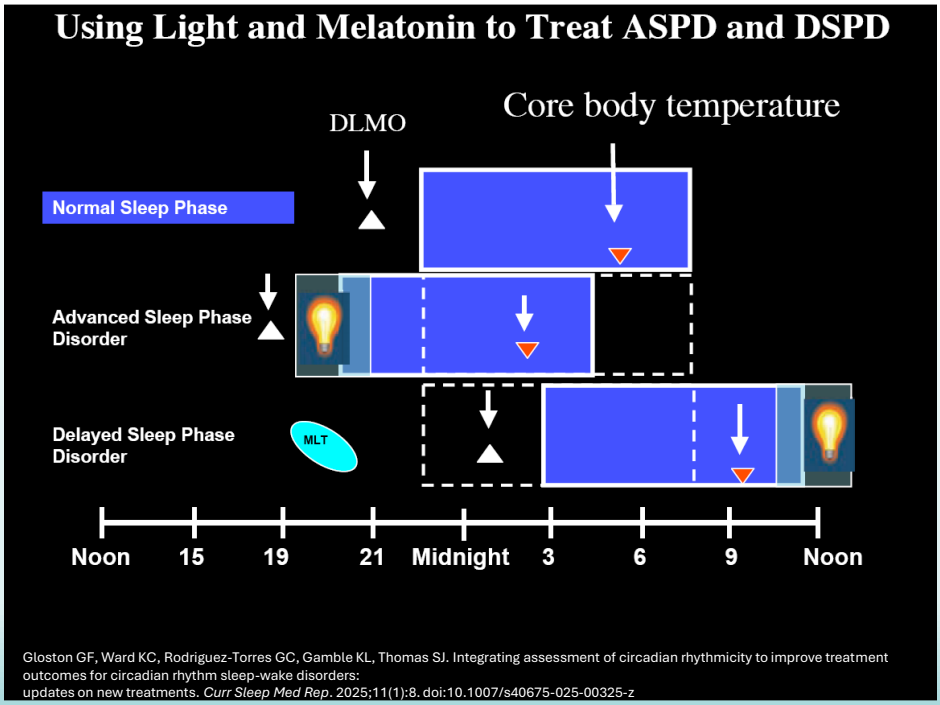

Gloston GF, Ward KC, Rodriguez-Torres GC, Gamble KL, Thomas SJ. Integrating assessment of circadian rhythmicity to improve treatment outcomes for circadian rhythm sleep-wake disorders: updates on new treatments. *Curr Sleep Med Rep*. 2025;11(1):8. doi:10.1007/s40675-025-00325-z

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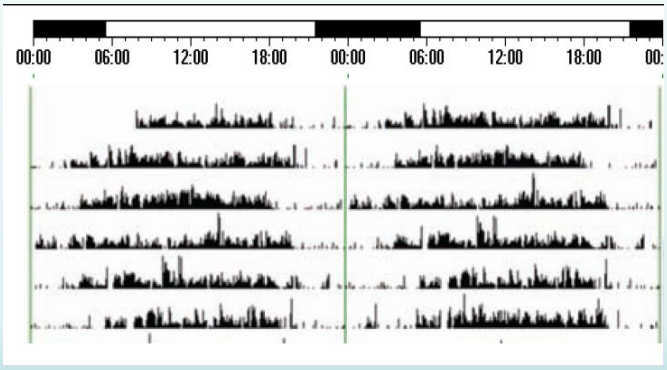
Insomnia

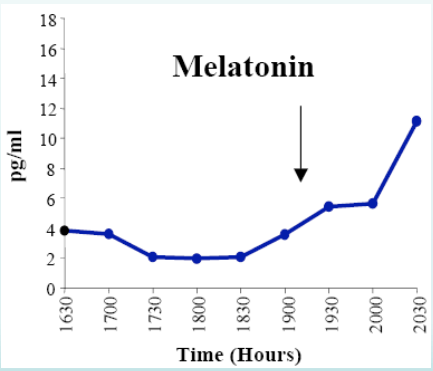
Advanced Sleep Phase

-78 y/o woman with early morning awakening and excessive daytime sleepiness over the last 2 years

-falls asleep at 8PM but would like to stay up until 10:30PM

-gets up at 3AM but scheduled wake up time is 6AM





Kim JH, Elkhadem AR, Duffy JF. Circadian rhythm sleep–wake disorders in older adults. *Sleep Med Clin*. 2022;17(2):241-252. doi:10.1016/j.jsmc.2022.02.003

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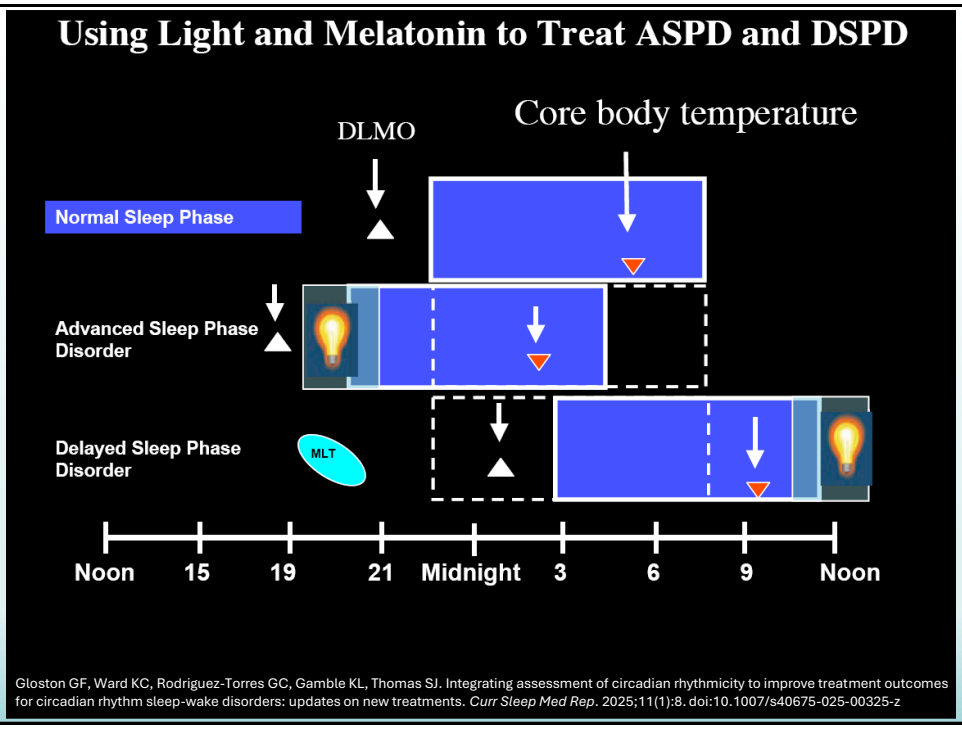

Gloston GF, Ward KC, Rodriguez-Torres GC, Gamble KL, Thomas SJ. Integrating assessment of circadian rhythmicity to improve treatment outcomes for circadian rhythm sleep-wake disorders: updates on new treatments. *Curr Sleep Med Rep*. 2025;11(1):8. doi:10.1007/s40675-025-00325-z

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1) Sleep changes with normal aging

2) Insomnia

-Pathophysiology

-Management

-Behavioral

-Medication

3) Circadian Rhythm

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All of the Following Occur as We Get Older EXCEPT:

A. increased awakenings, arousals, and stage shifts
B. decreased N3 Sleep
C. reduced sleep efficiency
D. phase advancement (go to and get up from bed earlier)
E. more sensitive to sleepiness and sleep deprivation

An Initial Trial of Medication for Insomnia Should Last…

A. As long as the patient needs it
B. For the rest of their life
C. 6 weeks then taper the medication
D. 12 months then reassess in your clinic

Which of the Following Medications Is FDA Approved for Sleep Onset Insomnia and Does Not Cause Physical Dependence?

A. zolpidem (Ambien)
B. zaleplon (Sonata)
C. eszopiclone (Lunesta)
D. ramelteon (Rozerem)
E. lorazepam (Ativan)

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