

Insomnia and What Can I Do To Sleep Better?

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Poor Sleep

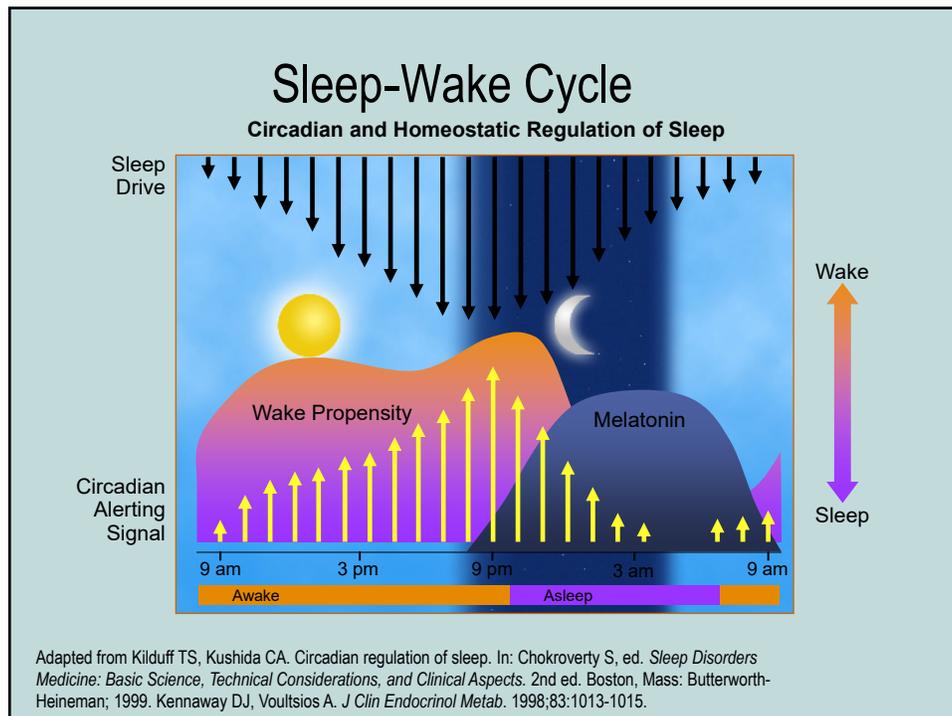
- Many people have a hard time sleeping at night
- There are many different reasons people have poor sleep
- All sleep problems can be helped
- The best way to get better sleep is to improve your sleep habits

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Outline

1. What controls our sleep/wake cycle?
2. Insomnia – what is it?
3. Insomnia – what are the consequences
4. Insomnia – how do we treat it?
5. Other sleep disorders that can mimic insomnia:
 - Circadian Rhythm Disorders
 - Restless Legs
 - Sleep Apnea

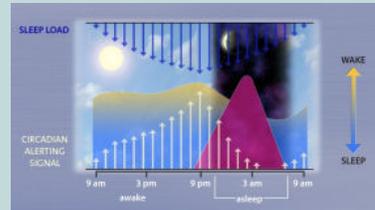
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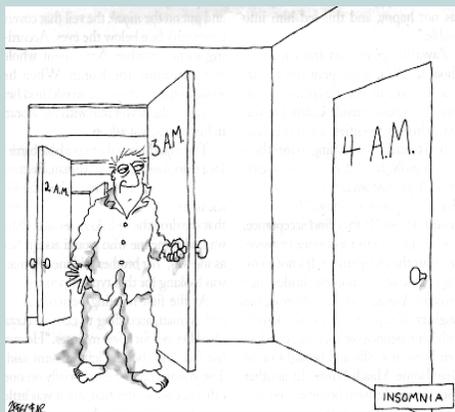
Sleep-wake Cycle Regulation

- Nighttime sleep
 - First part of night — sleep because we have been awake all day (homeostatic drive high)
 - Second part of night—sleep because circadian alertness is low
- Daytime wakefulness
 - First part of day—awake because we slept at night (homeostatic drive low)
 - Second part of day/evening—awake because circadian alertness is high (although sleep load is high)



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Insomnia: The patient's perspective



Slide courtesy of Dan Buysse

“My creativity diminishes, my **irritability** increases, my disposition suffers, my outlook is **gloomier**, my muscles feel **weaker**, my **energy** is kaput some days. Some days I'm too tired to accomplish anything but still **unable to nap or sleep**. It's an odd sensation. I feel as if I've been deprived of sleep and am exhausted but at the same time, as if I had drunk 5 cups of coffee and were overstimulated.”

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Definition of Insomnia

- Not being happy with either the amount of sleep you are getting or with how well you are sleeping
- OR
- Have a hard time falling asleep or staying asleep
- AND
- Your poor sleep effects how you feel during the day
 - These feelings have to be present for at least 3 times a week and have lasted for at least 3 months before an official diagnosis is made
 - But even if you do not have all these symptoms, and you are not happy with your sleep, it can be helped

Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, D.C.: American Psychiatric Press; 2013

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Insomnia ≠ Sleep Deprivation

	Insomnia	Sleep Deprivation
Sleep Opportunity	Adequate	Reduced
Sleep Ability	Reduced	Adequate



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What happens if you do not sleep well

- Problems with memory
- Problems with concentration
- Feeling more pain or poor health
- Having a hard time at school or at a job
- Being unhappy

1. Zammit GK, et al. *Sleep*. 1999;22 Suppl 2:S379-S385; 2. Bixler EO, et al. *Life Sci*. 1979;25(16):1379-1388; 3. Mellinger GD, et al. *Arch Gen Psychiatry*. 1985;42(3):225-232.; 4. Breslau N, et al. *Biol Psychiatry*. 1996;39(6):411-418; 5. Balter MB, Uhlenhuth EH. *J Clin Psychiatry*. 1992;53 Suppl:34-39; discussion 40-42.; 6. Simon GE, VonKorff M. *Am J Psychiatry*. 1997;154(10):1417-1423.; 7. Ford DE, Kamerow DB. *JAMA*. 1989;262(11):1479-1484.

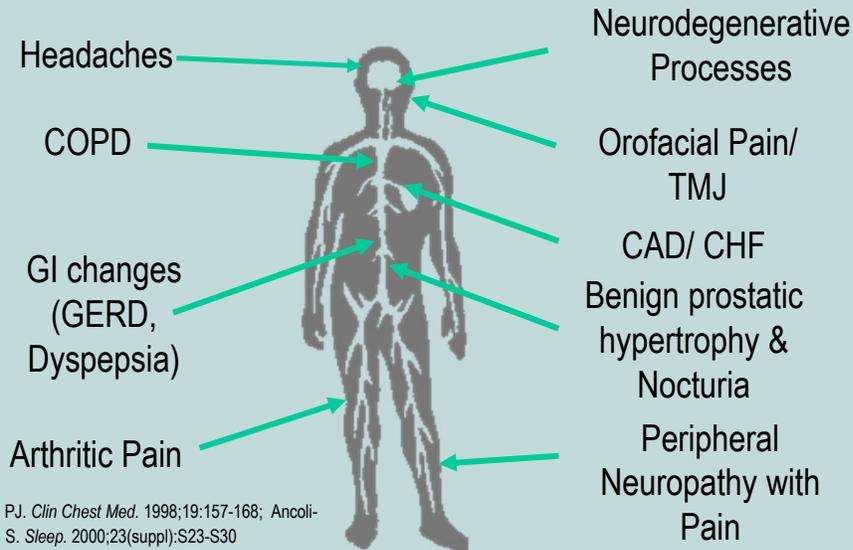
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Conditions often Co-morbid with Insomnia

- Medical / Psychiatric illness
- Medications / polypharmacy
- Circadian rhythm disturbances
- Primary sleep disorders

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Many Medical are Associated with Disturbed Sleep



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Medications and Substances Associated with Insomnia

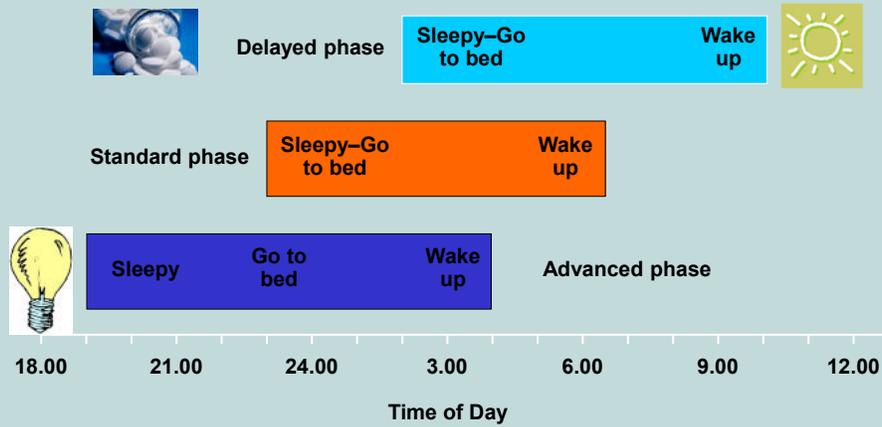
- Alcohol
 - Acute use
 - Withdrawal
- Caffeine
- Nicotine
- Antidepressants
 - SSRI
 - SNRI, atypical
- Corticosteroids
- Decongestants
 - Phenylpropanolamine
 - Pseudoephedrine
- β agonists, theophylline derivatives
- β antagonists
- Statins
- Stimulants
- Dopamine agonists

Any drug that crosses the blood brain barrier and affects a neurotransmitter system may be associated with insomnia

SSRI = Selective Serotonin Reuptake Inhibitor; SNRI = Serotonin and Norepinephrine Reuptake Inhibitor; Schweitzer, PPSM.

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Circadian Sleep Phases

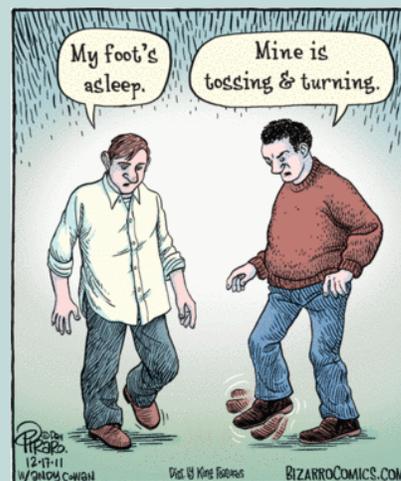


Modified from Ancoli-Israel, All I Want is a Good Night's Sleep, 1996

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Restless Legs Syndrome

- Restless Legs Syndrome
 - Feelings of “creepy/crawling” sensations in legs
 - Relieved only with movement



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Screening Questions If you answer **YES** to **ALL** 4 Questions...

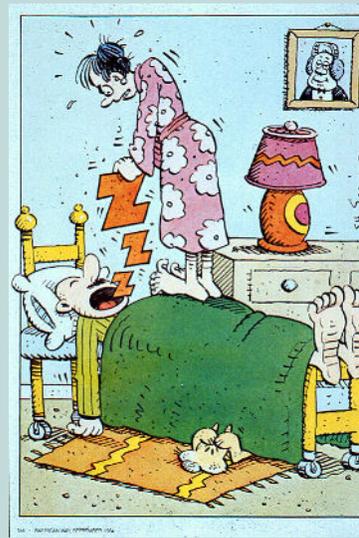


1. Do you have, or have you sometimes experienced, recurrent, uncomfortable feelings or sensations in your legs while sitting or lying down?
2. Do you have, or have you sometimes experienced, a recurrent need or urge to move your legs while sitting or lying down?
3. Do these uncomfortable feelings or sensations in your legs, or the need or urge to move, disappear/improve when you are active or moving around?
4. Are these uncomfortable feelings, or this urge to move, worse in the evening or at night compared with the morning?

Allen et al. Arch Int Med 2005 165(11):1286-92

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Sleep Apnea



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Treatments

- How do I improve my sleep?
- How is insomnia best treated?

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Sleep Habits

- The best way to help you sleep is to be sure you have good sleep habits
 - Just like you should brush your teeth at night (dental hygiene), you should have habits that will help you sleep

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Poor sleep habits

- Irregular sleep schedule
 - Going to bed or getting up at different times each day
- Excessive napping
- Caffeine (coffee, soda), alcohol, nicotine (smoking)
- Exercise or mental stimulation near bedtime
- Negative sleep associations (reading, TV)

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Rules for Better Sleep

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Cut Down on Your Time in Bed

- Staying in bed longer than your body needs to sleep causes insomnia
- Listen to your body – go to sleep when you are sleepy and not before
- In one study 90% of insomnia patients needed to curtail their time in bed



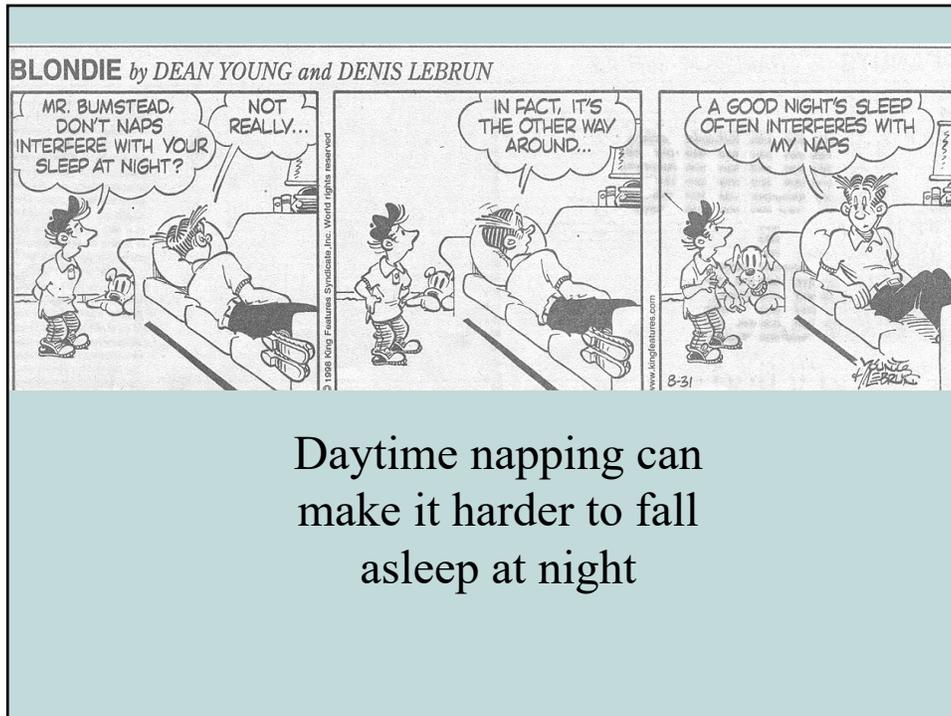
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Establish a regular sleep schedule



Get up at the same time every morning -- don't sleep in!

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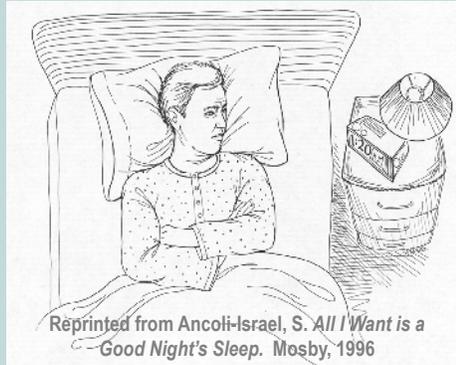
Exercise about 6 hours before bedtime

- When you exercise, your body temperature goes up
- It takes about 6 hours for it to start dropping
- When your body temperature drops, you get sleepy
- Exercise in the late afternoon/early evening may be most helpful for sleep.

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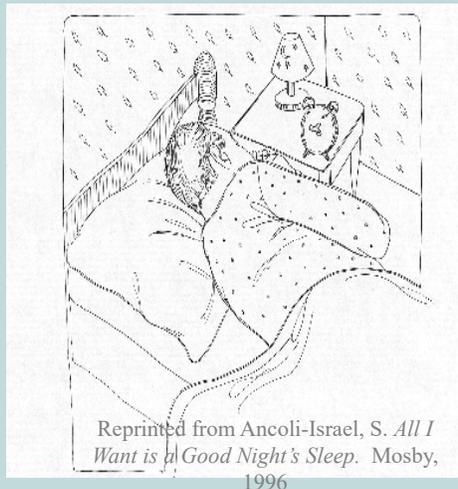
When you wake up during the night...

- What is the first thing you do?



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Avoid a Bedroom Clock



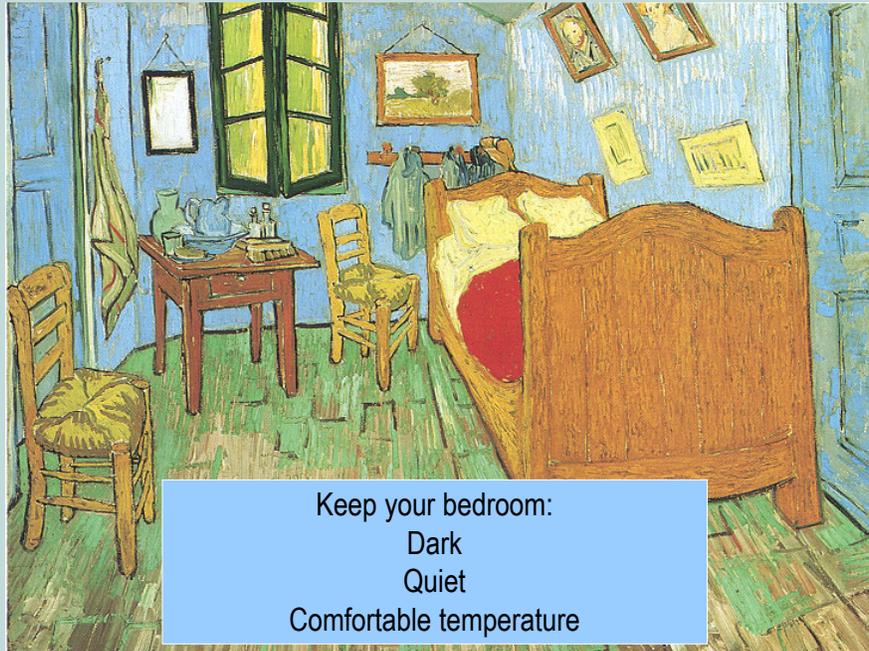
- Set an alarm, then hide all time pieces (e.g., in top dresser drawer)
- You will sleep best away from any time pressures

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If you do get up
at night, try not
to turn on lights



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Keep your bedroom:
Dark
Quiet
Comfortable temperature

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Eat a Light Snack



A glass of milk, cheese and crackers or any other light snack may help you fall asleep

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Deal with worries before bedtime

Set aside a “worry time”

During that time, write down your worries, think about each of them, write down what you will do about them tomorrow

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Four Cardinal Rules of Behavioral Treatment

1. Reduce your time in bed
 - You should only be in bed about 30 minutes more than your total sleep time.
2. Get up at the same time every day of the week, no matter how much you slept the night
3. Don't go to bed unless you're sleepy
4. Don't stay in bed unless you're asleep



Brief Behavioral Treatment of Insomnia (BBTI). Buysse et al. Arch Intern Med. 2011 May 23;171(10):887-95

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Rules for Good Sleep Explained

- Use the bed only for sleeping - do not read, watch TV, or eat in bed
- If you can't fall asleep, or you wake up and can't get back to sleep, move to another room. Stay up until really sleepy. The goal is to associate the bed with falling sleep quickly
- Repeat #3 as often as necessary
- Awaken at the same time every morning regardless of total sleep time
- Do not nap

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Stimulus Control

- Considered one of the most effective behavioral treatments
- Useful for both sleep onset and sleep maintenance problems
- Based on the behavioral principle of *classical conditioning*
 - Insomnia leads to stress, anxiety, wakefulness
 - This takes place *in bed*
 - The *bed* becomes associated with stress, anxiety, wakefulness



= Worry...
Wakefulness...
Waiting... ANXIETY

Chesson AL, Anderson WM, Littner M, et al. AASM standards of practice committee. *Sleep*. 1999;22:1-6.

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Stimulus Control (cont'd)

- Treatment involves changing the association:



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Worry...
Wakefulness...
Waiting...

ANXIETY

- If you're not asleep, get out of bed
- Over one or more nights, sleep drive increases, and sleep onset occurs more quickly.
- Over multiple trials, the bed is again associated with rapid sleep onset.



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A "cue" for falling
asleep fast...

Sleep...

Chesson Jr. AL, Anderson WM, Littner M, et al. AASM standards of practice committee. *Sleep*. 1999;22:1-6.

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Pharmacological Treatment

- Alcohol
- Anti-depressants
- Antihistamines
- FDA approved sleeping aids



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Choosing A Pharmacologic Therapy

(*not DEA controlled)

- Do you have difficulty initiating or maintaining sleep (or both)?
- How many hours can you devote to sleep or inactivity, after taking the medication?

Agent	Initiates Sleep	Maintains Sleep	Sleep with limited opportunity	Required Inactivity
Eszopiclone (Lunesta)	√	√		8+ hours
Zaleplon (Sonata)	√		√	4 hours
Zolpidem (Ambien)	√			7-8 hours
Zolpidem MR (Ambien CR)	√	√		7-8 hours
Zolpidem sublingual (Edluar)	√			7-8 hours
Zolpidem oral spray (Zolpimist)	√			7-8 hours
Zolpidem sublingual (Intermezzo)	√		√	4 hours
Ramelteon (Rozerem)*	√			-
Doxepin (Silenor)*		√		-
Suvorexant (Belsomra)	√	√		7 hours
Lemborexant (Dayvigo)	√	√		7 hours
Daridorexant (Quviviq)	√	√		7 hours

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Bottom Line

- Insomnia is a disorder
- Insomnia typically co-exists with other medical, psychiatric, and sleep disorders
- Insomnia is associated with significant consequences
- There are safe and effective behavioral and FDA approved pharmacologic treatments for insomnia

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The REFRESH Study for gynecologic cancer survivors

Are you a survivor of a gynecologic cancer?
Do you have difficulty sleeping?

If you are a survivor age 18-74 who finished treatment at least one month ago, you may be eligible for an exciting new research study at the University of Arizona!

You will be asked to answer some questions and make some changes to your sleep

All assessments can be completed at the University of Arizona or from the comfort of your home by telephone or videoconference

You may be eligible to earn up to \$150 in gift cards

For more information or to sign up call (520) 235-9186 or email refresh@arizona.edu

OR

Scan here to provide your information and we will contact you



An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

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The REFRESH Study – for gynecologic cancer survivors

Researchers at the University of Arizona are asking:



How can we help gynecologic cancer survivors get the sleep they need?

 THE UNIVERSITY OF ARIZONA
College of Nursing

An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

- Survivors aged 18-74 who finished primary treatment at least one month ago for Stage I, II, or III gynecologic cancer may be eligible
- Participants can earn up to \$150 in gift cards
- If you or someone you know are interested in learning more about this study, please:

- call (520) 235-9186
- email refresh@arizona.edu
- fill out a short form and a research team member will contact you: <https://redcap.link/REFRESH>

QR code for interest form:



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