Insomnia Assessment

Insomnia Assessment

- Take me through a 24-hour period
- When do you go to bed?
- When do you fall asleep?
- What do you do while trying to sleep?
- How much time do you spend awake in the night?
- When do you finally wake up in the morning?
- Daytime effects
- Frequency and duration of the problem

Contributing Factors

Restless Legs

- Four criteria for diagnosis:

1. Uncomfortable sensation (can be anywhere, but is usually in the legs)
2. Worse at night
3. Worse at rest
4. Temporarily relieved by movement

- Patients rarely mention restless legs – they mention difficulty falling asleep

Circadian Rhythm Disorders

- Numerous types – most common is Delayed Sleep-Wake Phase Disorder (DSWPD)
- Usually starts in adolescence
- Internal body clock is delayed relative to outside world
- Cannot fall asleep until very late – sleep onset insomnia
- Feel sleepiest in the morning and most alert **late** at night
- 'If society allowed you to sleep from e.g. 4am to midday, would you have any problem with your sleep?' – if no, likely DSWPD

Daytime Sleepiness

- Insomnia alone rarely causes daytime sleepiness – people with insomnia 'tired but wired'
- Epworth Sleepiness Scale - if falling asleep in the day, consider **obstructive sleep apnoea** (OSA) or **periodic limb movements**
- STOPBANG to screen for OSA
- Refer to sleep clinic

Comorbid Insomnia & OSA

- 30-50% of OSA patients have clinically significant insomnia symptoms
- Middle insomnia is most common
- Insomnia symptoms may be more common in non-sleepy OSA patients than sleepy ones.
- 30-40% chronic insomnia patients have OSA

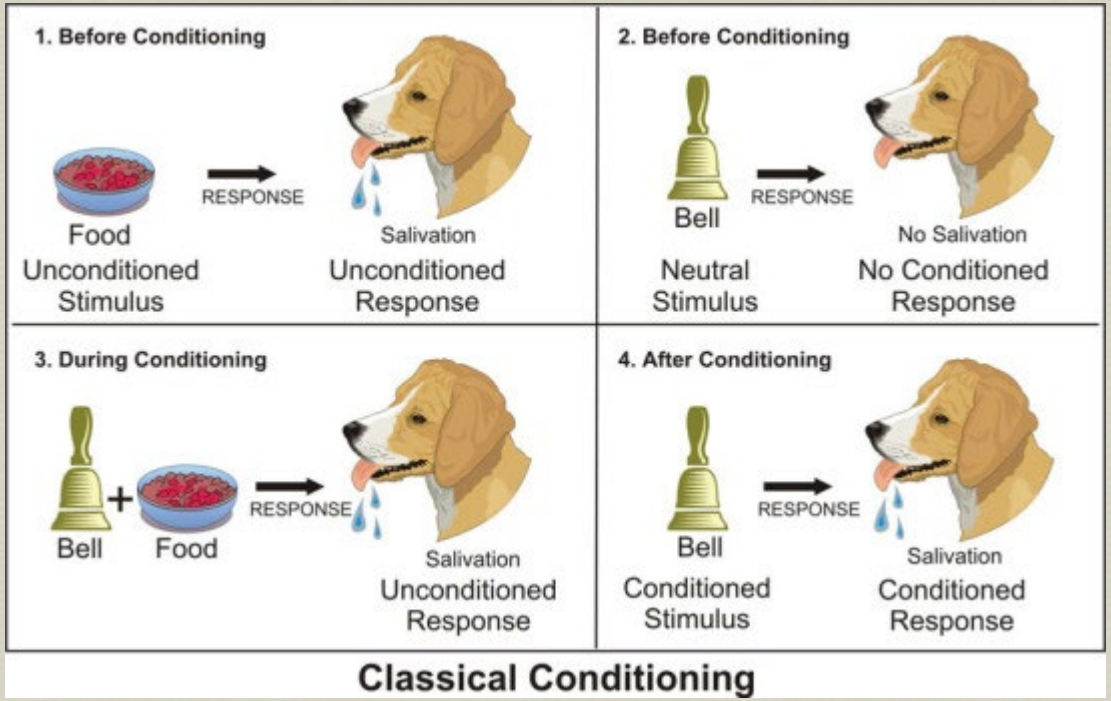
CBT-I Principles

- The rules are different if you have difficulty sleeping vs a good sleeper
- If you usually sleep very well, you don't need to follow this guidance too strictly
- But if you're a bad sleeper, these rules are for you!

Sleep Stimulus Control

Sleep Stimulus Control

- What is a stimulus? Something that causes us to respond in a particular way
- Pavlov's dogs:



Sleep Stimulus Control

- A good sleeper: bedroom/bed is a stimulus for sleep

  Bed → Feel sleepy → Fall asleep

- A person with insomnia: bedroom/bed becomes a stimulus for being awake

  Bed → Anxiety/anger/frustration→ Be awake

Is your Bedroom a Stimulus for *Everything?*

What do you do in your bedroom/bed?

- Reading
- Watching TV/youtube
- Video games
- Social media
- Talking on the phone
- Meditating
- Working
- Arguments with your partner/family

Making Bedroom a Stimulus for *Sleep*

What should you be using your bedroom for?

- Sleep
- Having sex
- Getting dressed

Sleep Stimulus Control

3 important rules:

1) Move your activities out of your bedroom (or at *least* your bed area)

2) Don't go to bed too early

3) The '15 minute rule'

When to go to bed

- Only when it is around/past your usual bedtime AND you are feeling **sleepy**
- What is sleepy?

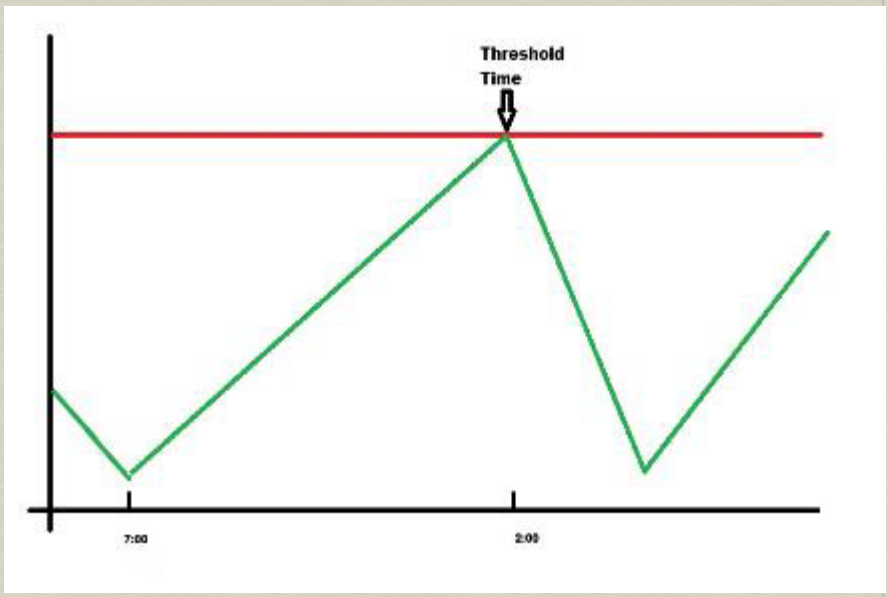
15 minute rule

- Don't lie in bed for more than 15-20 mins (but don't time it!)
- If you haven't fallen asleep, go to another room to do something relaxing/enjoyable until you feel sleepy
- Make a list now of 4-5 things to do at night, and get them ready in preparation!

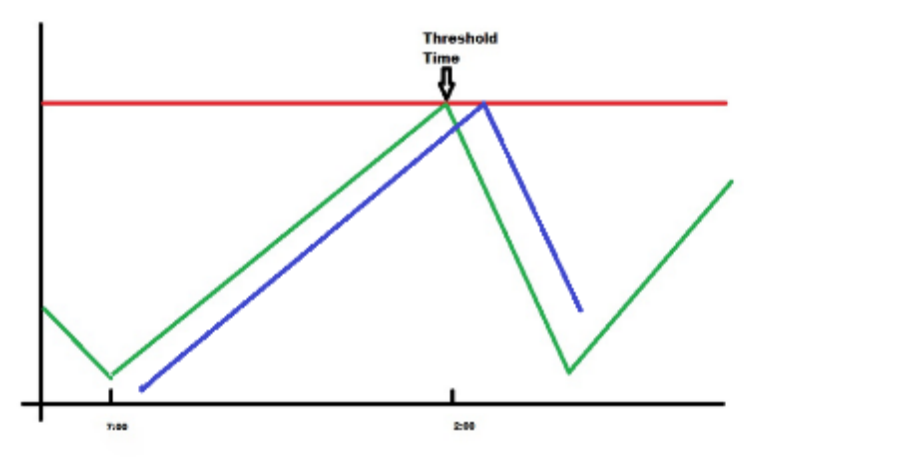
Sleep Scheduling

The Homeostatic Sleep Drive

- From the moment we wake up in the morning we start to accumulate sleepiness. We are filling up our sleep tank with sleep fuel.
- The chemical substrate of this is probably adenosine.
- When we sleep at night we use up the fuel.
- When we run out of fuel in the morning we wake up.

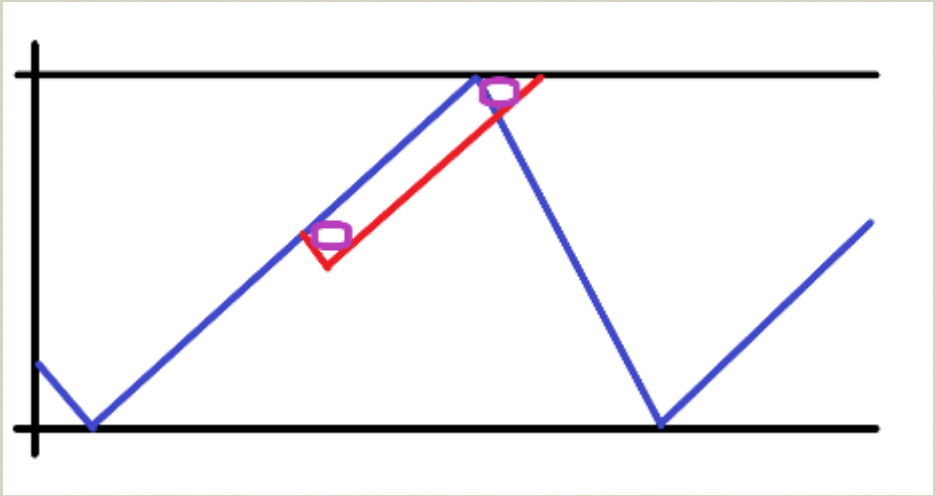


Start Filling Your Tank at the Same Time Every Day



- Set an alarm to wake up and, get up at the same time every day.
- If you start to fill your tank at the same time every day, it will reach full at the same time every night.
- You will therefore feel sleepy at the same time every night and your bed time will become more consistent too.

Jealously Guard Your Sleep Fuel

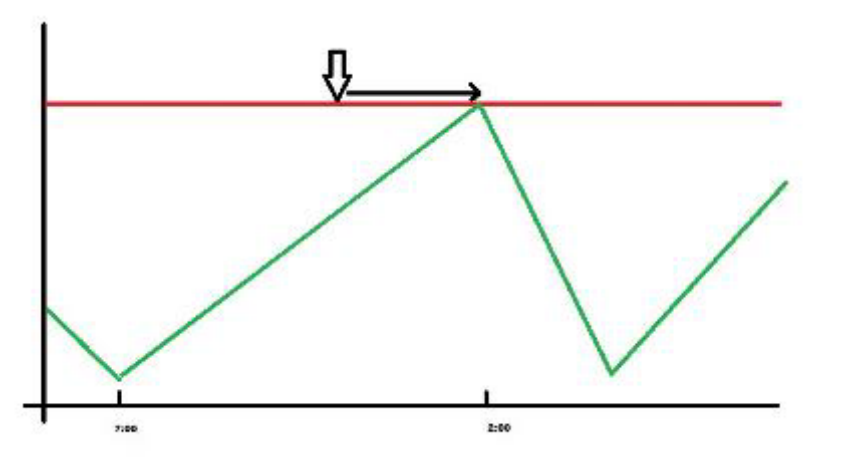


- Every time you nap (intentionally or unintentionally) you use up some of your sleep fuel.
- Any sleep during the day is stealing some of your sleep from the night.
- So avoid napping if possible.
- If a nap is unavoidable keep it brief and early!

Explain Sleep Efficiency

- Sleep efficiency is a measure of how consolidated the sleep is and a reasonable measure of sleep quality.
- Keep a sleep diary for a week, recording Time in Bed (TIB) and Total Sleep Time (TST).
- Sleep Efficiency = TST/TIB x 100.
- A normal sleep efficiency is around 90%.

Go to Sleep When Your Tank is Full



- Set an earliest bed time:
- Earliest bed = Rising time – average sleep time across a week.
- If average sleep time is less than 5 hr then Earliest bed = Rising time – 5hr.
- Only go to bed when you have a) reached that earliest bed time and b) you are sleepy.

Adjusting the Bedtime

- Keep a sleep diary and recalculate the sleep efficiency at the end of each week.
- If the sleep efficiency is less than 85% then move the earliest bedtime 15 min later for the subsequent week (unless they are at the 5hr floor in which case keep it the same).
- If the sleep efficiency is 85-89% keep the earliest bedtime the same.
- If the sleep efficiency is 90% or above then move the earliest bedtime 15 min earlier for the subsequent week.

Simplified Version

- Start with current bedtime.
- Move bedtime 15 – 30 minutes later/week.
- When you are falling asleep within 30 minutes and not awake more than 30 minutes in the night stop compressing the bedtime.
- After a week try moving the bedtime 15 minutes earlier.
- If the time to fall asleep or the wake time in the night increases to more than 30 minutes move bedtime 15 minutes later again.

	Action	Promoters	Inhibitors
GABA	Sedation	BZD's & Z Drugs	Flumazenil; Clarithromycin
Melatonin	Sedation	Melatonin & Agomelatine	B-Blockers; NSAIDs
Adenosine	Sedation		Caffeine
NA	Activation	Venlafaxine	Prazosin; Trazodone
Serotonin	Activation	SSRI's	Trazodone
Dopamine	Activation	Amphetamines	Antipsychotics
Histamine	Activation	Pitolisant	Antihistamines, TCAs, atypical antipsychotics, mirtazapine
Ach	Activation	Cholinesterase inhibitors; nicotine	TCAs; sedating antihistamines
Orexin	Activation		Daridorexant

Pharmacokinetics

	Tmax (hours)	$T_{1/2}$ (hours)	Hangover
Zopiclone	0.5-2	5-6	Yes
Zolpidem	1.7-2.5	1.5-2.5	Probably not
Temazepam	1-3	8-20	Maybe
Circadin	0.75 – 3	3-4	No
Daridorexant	1 - 2	8	Probably not

Things to Consider

- Can you treat insomnia and the comorbid psychiatric condition with a single drug?
- Do they drive? If so, shorter acting drugs may be better. Avoid driving for 13hr post zopiclone and 9hr post zolpidem/daridorexant.
- Are they a sole carer who may need to wake in the night? If so it's best to avoid meds, though daridorexant doesn't raise the arousal threshold.
- What time of night do they have the problem?

Insomnia prescribing: My Practice

- Initial insomnia: zolpidem at bedtime; melatonin, mirtazapine, trazodone 1-2 hour before bed .
- Mid insomnia: sedating antidepressant, zopiclone, daridorexant, at bedtime.
- Terminal insomnia: zopiclone, daridorexant or sedating antidepressant at bedtime.
- All three: Zopiclone, daridorexant at bedtime; mirtazapine, trazodone 1 – 2 hours before bed.
- If daytime sedation is undesirable avoid long acting drugs.
- Don't rely solely on medication – combine with behavioural approach.

Why No Mention of Promethazine?

- Antihistamines can be very good for sleep maintenance insomnia due to long half life (12-15hr) and the fact that peak sedation may occur some time after peak plasma levels.
- But promethazine has powerful anticholinergic properties (anticholinergic burden score = 3).
- This increases the risk of side effects including tachycardia, constipation, urinary retention, increases the risk of delirium.
- Increases the risk of dementia.

Take-Home Messages for Clinicians

Main Take-Home Messages

- Main take home messages

1) Sleep hygiene is rarely effective, CBT-I is the 1st-line treatment recommended by NICE
2) CBT-I is very effective and cost-effective for chronic insomnia, and we should be referring more patients
3) Insomnia severely impacts QoL, so should never be left untreated
4) There is sometimes a role for medication, and stopping sleeping tablets should be a joint decision

- 4 key CBT-I techniques

1) Sleep stimulus control
2) Get up at the same time every day
3) Don't go to bed too early – only when it's past usual bedtime and sleepy
4) No napping