INSOMNIA

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Neural Mechanisms of Sleep

- Sleep/wakefulness dependant on neurons of **Diffuse Modulatory Neurotransmitter Systems** (NE, 5HT,Ach, DA)

- Ascending Reticular Activating System – several regions of brain stem and midbrain; critical in wakefulness

- NE (locus ceruleus), 5HT(raphe nuclei), ACh(basal forebrain) and H1 (midbrain) promote and maintain waking and wakefulness

- The Diffuse Modulatory Systems control the rhythmicity of the thalamus; thalamus blocks upward flow of sensory info to cortex during sleep

- Descending, inhibitory branches of the Diffuse Modulatory Systems are involved in sleep

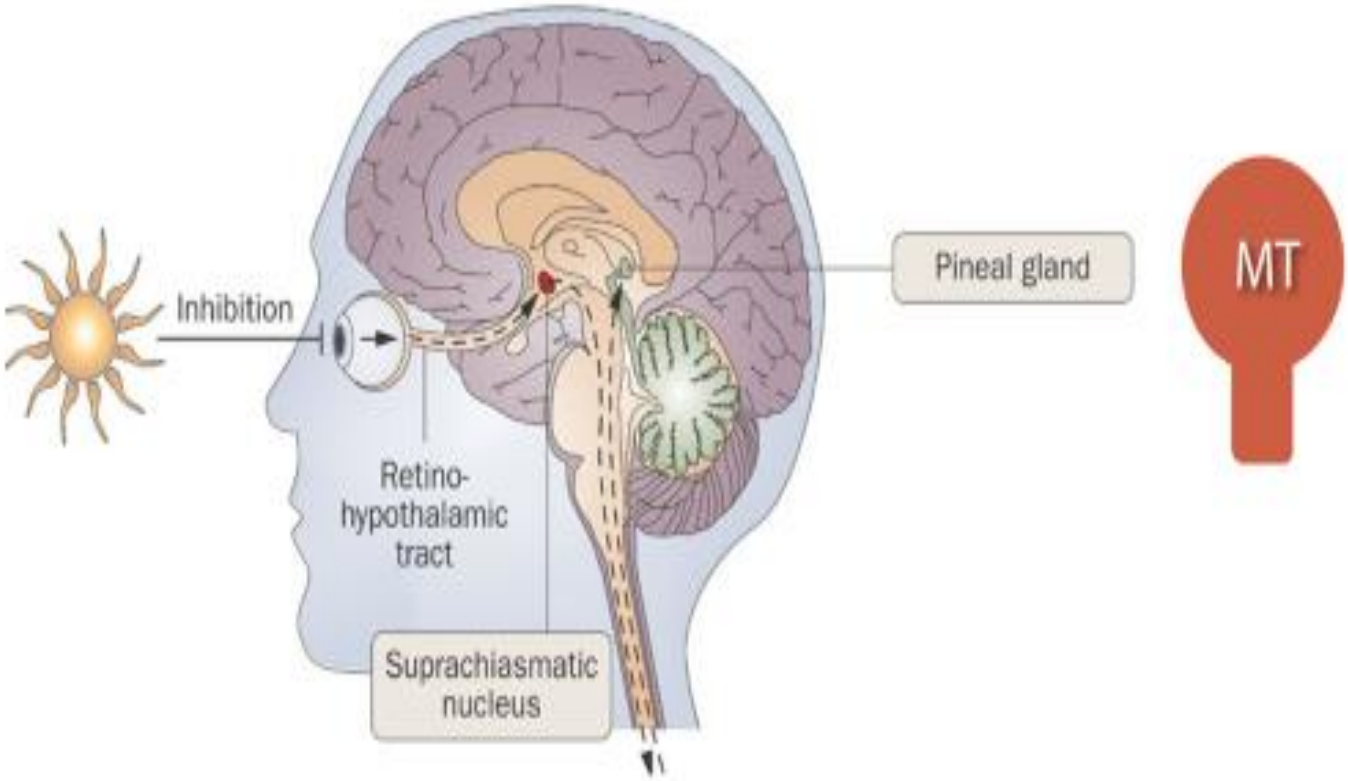
CIRCADIAN RHYTHM

- All mammals coordinate their behaviour based on daily cycles of light and darkness/circadian rhythms
- Most physiologic and biochemical processes of the body follow circadian rhythms
- In animal studies, circadian rhythms continue despite removal of 24hr cycles as they are biologically based
- Daylight and darkness cycles serve to reset the internal brain clock

Circadian Rhythm

- Environmental time cues are termed **Zeitgebers** (time givers)
- Suprachiasmatic nuclei (SCN) of the hypothalamus serve as the 'Brain Clock'
- Lesions to both SCN abolish the circadian rhythmicity of sleep, waking, feeding, and physical activity but do not abolish sleep

Circadian rhythm and melatonin



Reproduced from:
Circadian sleep–wake rhythm disturbances in end-stage renal disease. Birgit C. P. Koch, J. Elsbeth Nagtegaal, Gerard A. Kerkhof & Piet M. ter Wee. Nature Reviews Nephrology 5, 407-416 (July 2009)

- Photosensitive mechanism in place for resetting the brain clock
- Light (stimulates light sensitive melanopsin cells in retina) resets the SCN via retinohypothalamic tract
- In darkness, SCN inhibition of the pineal gland is released and melatonin is secreted, promoting sleep induction

When someone asks me when was the last time I got a decent night's sleep...

INSOMNIA- What's the big deal?

- According to the AASM:-
- 30% of adults have symptoms of insomnia
- 9-12% have symptoms severe enough to cause daytime consequences
- up to 6-10% meet the criteria for Insomnia Disorder

- As many as 95% of adult Americans have reported insomnia at some point in their lives

INSOMNIA- What's the big deal?

- Chronic sleep deprivation:-
- Increased risk of metabolic syndrome
- Increased cardiovascular morbidity and mortality
- Increased risk of mental illness

Definition of INSOMNIA

- **Insomnia** is repeated difficulty with:-
- Sleep initiation
- Sleep maintenance
- Sleep consolidation
- Sleep quality
- Results in some form of daytime impairment
- Difficulties present despite adequate time for sleep

PATHOPHYSIOLOGY

- Biological, psychological, physical and environmental factors

- Patients with chronic insomnia may have an underlying predisposition to insomnia :-

- Hyperarousal – ↑brain arousal, ↑ACTH, urinary cortisol and adrenaline secretion
- Increased EEG beta activity at sleep onset
- Increased brain glucose consumption at sleep onset
- Increased 24-hour metabolic rates
- Higher rates of depression and anxiety

Predisposing factors

- Genetic factors:-
- Multiple genes responsible for sleep
- Genetic susceptibility to stimulants e.g. caffeine
- Mutations in circadian clock genes
- Mutations to gene encoding GABAA receptor
- Serotonin receptor transporter gene mutations, increase risk of depression
- RARE- Fatal familial insomnia – mutation of PRNP gene

Precipitating factors

- Sleep-wake schedule changes
- Work-related events
- Positive/negative family events
- Heath events
- Medical conditions
- Medications
- Other sleep disorders
- Depression and anxiety

Perpetuating factors

- Cognitive mechanisms:-
- Misconceptions about sleep requirements
- Excessive worry about effects of sleep disturbance
- Heightened anxiety about sleep

- Behavioural mechanisms:-
- Conditioning-continued association of sleeplessness with situations and behaviours typically related to sleep
- Trying to “catch up” by day time napping

International Classification of Sleep Disorders – 2nd edition(ICSD-2) classification

- Adjustment Insomnia
- Behavioural insomnia of childhood
- Idiopathic Insomnia
- Inadequate sleep hygiene
- Insomnia due to drug/substance, medical condition, or mental disorder

- Paradoxical insomnia
- Psychophysiological (Primary) insomnia
- Insomnia NOT due to substance or known physiologic condition, Unspecified
- Primary sleep disorders causing insomnia

Adjustment Insomnia

- Acute/transient insomnia precipitated by a stressor
- lasts $\leq$ 3months
- 15-20% in adults
- Causes are environmental and stress-related
- Insomnia resolves when stressor removed or there is adaptation to the stressor

Psychophysiological (Primary) Insomnia

- 1–2% general population
- Precipitated by prolonged period of stress and subsequent somatised tension and agitation
- ↑focus and anxiety about sleep
- Difficulty falling asleep at desired bedtime, but no difficulty falling asleep during monotonous tasks
- Intrusive thoughts, inability to quiet mental activity
- Inability to relax the body to allow sleep onset
- Can sleep away from home

Idiopathic Insomnia

- Typically begins in childhood
- Chronic, persistent course
- No identifiable cause
- 0.7-1% adolescents and young adults

Paradoxical insomnia

- Complaint of severe insomnia without objective evidence of sleep disturbance
- Sleep log may show no sleep at all for several nights each week, but no day time naps
- Daytime impairment much less severe than would be expected given the level of sleep deprivation reported

Insomnia due to Mental Disorder

- DSM-5 criteria must be met for a mental disorder
- The insomnia must be temporally associated with the mental disorder
- Many chronic Mental disorders are associated with sleep disturbances
- Chronic insomnia of $\geq$1 year duration is associated with increased risk of Depression

Insomnia due to Medical Disorder

- Cardiovascular disease (44.1%)
- Neurologic disorders- Parkinson disease, movement disorders, headache syndromes (66.7%%)
- Chronic pain (48.6%)
- GI problems (55.4%)
- Urinary problems (41.5%)

Insomnia due to Drug/substance

- There is current, dependence on/abuse of a substance known to cause sleep disruption either during periods of intoxication or withdrawal
- There is ongoing use of or exposure to a medication, food, or toxin known to have sleep disruptive properties

Some Medications associated with sleep disturbance

- Beta blockers
- Clonidine
- Theophylline
- Antidepressants (e.g. fluoxetine)
- Decongestants (phenylephrine, pseudoephedrine)
- Stimulants (methylphenidate, dextroamphetamine)
- Antiseizure drugs (lamotrigine)

Behavioural Insomnia of Childhood

- Sleep-onset type:-
- Child unable to fall asleep without certain conditions
- Demanding/problematic sleep onset associations
- Night time awakenings require caregiver intervention for return to sleep

- limit-setting type
- Difficulty initiating or maintaining sleep
- Inconsistent/ insufficient limit-setting to allow establishment of appropriate sleep behaviour

- 10-30% of children

Inadequate Sleep-Hygiene

- 1-2% adolescents/young adults
- Improper sleep scheduling; frequent napping; variable wake/sleep times
- Routine use of stimulants or alcohol close to bed time
- Frequent use of bed for stimulating activities
- Mentally/physically/emotionally stimulating activities too close to bedtime
- Uncomfortable sleep environment

Unspecified Insomnia

- Insomnia suspected to be caused by underlying mental disorder/psychological factors but insufficient evidence to make diagnosis

Primary sleep disorders causing Insomnia

- Restless Legs Syndrome
- Obstructive Sleep Apnoea/hypopnea syndrome
- Circadian Rhythm Disorders

Insomnia Disorder (DSM-5 criteria)

A. A predominant complaint of dissatisfaction with sleep quantity or quality, associated with one or more of the following symptoms:

1. Difficulty initiating sleep
2. Difficulty maintaining sleep
3. Early morning awakening with inability to return to sleep.

B. The sleep disturbance causes clinically significant distress or impairment in social, occupational, educational, academic, behavioural, or other important areas of functioning.

C. The sleep difficulty occurs at least 3 nights per week.

D. The sleep difficulty is present for at least 3 months.
E. The sleep difficulty occurs despite adequate opportunity for sleep.
F. The insomnia is not better explained by, and does not occur exclusively during the course of another sleep-wake disorder (e.g. narcolepsy, a breathing-related sleep disorder, a circadian rhythm disorder, a parasomnia)
G. The insomnia is not attributable to the effects of a substance (e.g. a drug of abuse, a medication)
H. Coexisting mental disorders and medical conditions do not adequately explain the predominant complaint of insomnia

DSM-5 Specifiers for Insomnia Disorder

- With non-sleep disorder mental comorbidity, including substance use disorders
- With other medical comorbidity
- With other sleep disorder

- Episodic : symptoms last at least 1 month but less than 3 months
- Persistent: symptoms last 3 months or longer
- Recurrent: 2 or more episodes within the space of 1 year

Epidemiology

- 30-35% of adults in the US- sleep disturbance
- 10% chronic insomnia
- Similar figures internationally:-
  - WHO- 27% adults reporting difficulty sleeping
  - Quebec – 9.5% met criteria for Insomnia
  - Switzerland 9% chronic insomnia
- Few patients seek specific help from their physician

Demographics

- Sleep disturbances and chronic insomnia:-
- Women 1.4times more likely than men to report symptoms
- More common in women with menstrual problems
- More common in the elderly –nearly 50%
- Sleep-disordered breathing more common in African-Americans, while Insomnia symptoms more often reported in whites

Associated Risk Factors

- Female gender
- Increased age
- Depression
- Widowed/divorced/separated
- Unemployment
- Lower educational attainment (↑risk mental disorders, substance use)
- Economic inactivity

CLINICAL PRESENTATION OF INSOMNIA

- Dissatisfaction with sleep quality and/or quantity
- Difficulty initiating (**initial insomnia**)
- Difficulty maintaining sleep (**middle insomnia**)
- Early morning waking(**late insomnia**)

- Nonrestorative sleep
- Fatigue and day time sleepiness
- Difficulties in attention, concentration and memory
- Irritability, mood lability, depressive and anxiety symptoms

Consequences of Untreated Insomnia

- ↓concentration, memory
- Difficulty coping with minor irritations
- ↓enjoyment of social interactions
- Reduced quality of life

- ↑risk of metabolic syndrome
- ↑mortality
- 2-fold ↑risk of fatigue-related MVA
- ↑risk Depression and anxiety

ASSESSMENT OF INSOMNIA

- Medical history and Review of Systems
- Psychiatric history
- Family history :-
  - Risk of heritable conditions associated with insomnia e.g. some psychiatric disorders
  - Risk of fatal familial insomnia (very rare-50 families worldwide with the mutation
- Social history:-
  - Recent situational stressors
  - Past stressors/illness
  - Recreational substance use

- Careful sleep history:-
  - Timing of insomnia
  - Sleep habits
  - Symptoms of other sleep disorders e.g. restless legs, snoring, sleep paralysis, unusual behaviour during sleep
- Full medication history
- Full physical examination

- 2 week sleep log to define sleep-wake patterns
- A standardized sleepiness assessment such as the Epworth Sleepiness Scale

SLEEP–LOG/DIARY

Patient Name							
Date	**dd/mm/yyyy**	**dd/mm/yyyy**	**dd/mm/yyyy**	**dd/mm/yyyy**	**dd/mm/yyyy**	**dd/mm/yyyy**	**dd/mm/yyyy**
Bed time							
Minutes spent falling asleep							
Number of awakenings							
Total minutes of awakenings							
Number of nightmares							
Rise time							
Minutes of daytime naps							

EPWORTH SLEEPINESS SCALE

- ESS is a self-administered questionnaire with 8 questions
- The ESS score (the sum of 8 item scores, 0-3) can range from 0 to 24
- the reference range of 'normal' ESS scores is zero to 10
- The higher the ESS score, the higher that person's average sleep propensity in daily life (ASP), or their 'daytime sleepiness'

Workup

Insomnia is a clinical diagnosis.
Investigations intended to rule out comorbid disorders:-

- Sleep log/diary
- Hypoxemia studies - ABG, oximetry if hx suggestive of COPD
- Polysomnography if hx suggestive of Sleep Apnoea or Restless leg Syndrome
- Genetic testing if family hx suggestive
- Radiological/hematologic investigations as guided by history and examination

Differentials

- Medication-related insomnia
- Sleep Apnoea and other Sleep Disorders
- Depression, Mood and Anxiety disorders

TREATMENT AND MANAGEMENT

- According to the American Association of Sleep Medicine (AASM), the goals of treatment are :-
- Improve sleep quality
- Improve related daytime impairments

- **AASM guidelines** recommend Psychological and behavioural interventions as INITIAL therapy for primary insomnia

- Comorbid psychiatric or medical disorders should be treated AND psychological and behavioural interventions can improve outcomes

TREATMENT AND MANAGEMENT

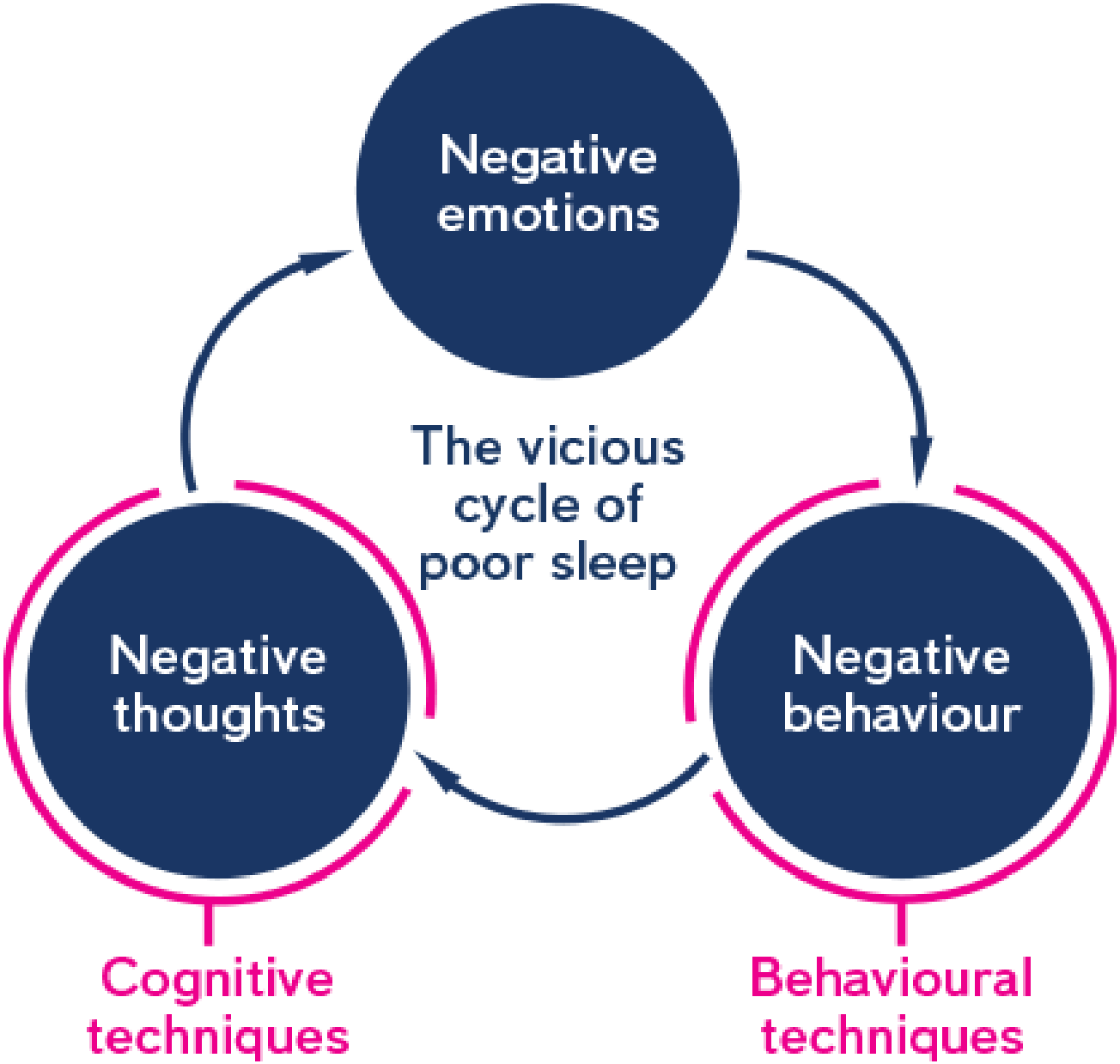
- Psychological – focus on CBT
- Pharmacologic
- Lifestyle change – diet and exercise
- Alternative approaches

COGNITIVE BEHAVIOURAL THERAPY

- Combines Cognitive and Behavioural techniques to overcome dysfunctional sleep behaviours, misperceptions and distorted thoughts about sleep

- Is **NOT** a quick fix

- Requires the patient to commit to multiple sessions


Negative emotions
The vicious cycle of poor sleep
Negative thoughts
Negative behaviour
Cognitive techniques
Behavioural techniques

EVIDENCE TO SUPPORT CBT-I

- Several studies show significant, sustained improvement in sleep symptoms with CBT
- In the short term, benefits are similar to medication
- In the long term, benefits can persist even up to $\geq$36 months post treatment

CBT-I Components

- Sleep hygiene education
- Stimulus-control therapy
- Sleep restriction therapy
- Cognitive therapy
- Relaxation therapy

SLEEP HYGIENE EDUCATION

- Focus is on modifiable environmental and lifestyle components that interfere with sleep, as well as sleep promoting behaviours
- Habits and behaviours are not easy to change and only 1-2 components/behaviours should be addressed at a time
- Improving sleep habits can enhance sleep even when the cause of insomnia is physical

SLEEP HYGIENE TIPS

DOs	DONTs
Regular sleep and wake times	Take day time naps
1hour wind down before bed	Watch television/use phone/tablet/read in bed
Set bedroom environment- dark, cool, quiet	Eat a heavy meal before bed
Use bedroom for sex and sleep only (in that order)	Use alcohol or tobacco to aid sleep
Maintain regular exercise schedule	Use caffeine or stimulants in afternoon/evening
Write out any worries/preoccupations, rather than ruminating at bedtime	Exercise before going to bed

HEALTHY SLEEP HABITS

Improve your sleep with some positive lifestyle changes and consistent sleep habits

1 REGULAR SLEEP SCHEDULE

Try to maintain a consistent sleep pattern 7 days a week. Getting up at the same time every day can help.

2 RELAXING BEDTIME ROUTINE

Spend time before bed relaxing: read a book, meditate, stretch, do yoga, have a shower or bath. Avoid difficult conversations, activities or work.

3 AVOID STIMULANTS

Don't drink caffeine, sugary or energy drinks in the evening. Avoid nicotine before bed. Only drink alcohol in moderation at night, if at all.

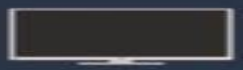
4 GOOD SLEEP ENVIRONMENT

Keep your bedroom clean, tidy and comfortable. Use a quality mattress and bedding. Keep the bedroom aired, and a temperature between 60 -70 °F (17-21 °C)

5 BLOCK OUT NOISE AND LIGHT

Make sure the bedroom is dark and quiet. Use blackout curtains or a sleep mask. Use earplugs, white noise, a fan or music to mask external noise.

6 ONLY SLEEP AND INTIMACY



Only use the bed for sleep and intimacy with a partner. Avoid watching TV or using other devices in bed. That will help associate the bed with sleep.

7 EXERCISE AND DAYLIGHT

Try to do regular exercise, but not too intense before bedtime. Spend time outside in the daylight. Even a short walk during the day can improve sleep.

8 EAT WELL

Try to eat a balanced, healthy diet. Avoid heavy, fatty, fried or spicy food late in the evening if you get indigestion. Bananas, yogurt or healthy cereal are good bedtime snacks.

Created by No Sleepless Nights

STIMULUS-CONTROL THERAPY

- Aims to undo conditioned associations with sleeplessness/ difficulty initiating sleep
- Aims to enhance stimuli that promote/are associated with sleeping
  - Associate bed with sex and sleep only
  - No other activities in bed i.e. TV, reading, phone etc
  - Restrict sleep to night time – no day time naps
  - Set fixed wake time regardless of bed time

SLEEP-RESTRICTION THERAPY

- Targets patients who lie awake in bed unable to sleep
- Aim is to gradually reduce nocturnal wakefulness
- Sleep efficiency is monitored (time asleep as percentage of time in bed

SLEEP-RESTRICTION THERAPY

- No daytime naps
-
- Restrict time lying awake in bed
- Encouraged to do monotonous activity in another room until sleepy
- Bedtime should not be reduced to less than 4 hrs
- Patient warned of effects of daytime sleepiness

COGNITIVE THERAPY

- Targets the negative emotional response to the patient's assessment of the sleep-related problem
- Negative emotional response causes arousal which perpetuates insomnia
- Maladaptive cognitive schema lead to :-
- Exaggerated perception of negative consequences of insomnia
- Unrealistic expectations about sleep requirements

Table 20–3.
Catastrophizing and Alternative Thoughts Scenario

Situation	Alarm clock goes off at 6:02 A.M. Monday
Thought	"I hardly slept at all last night. I should be able to get more sleep. There must be something wrong with me. Great, I'll be too tired to concentrate on anything today."
Behavior/feeling	Hit snooze to try to get 9 more minutes of sleep. Despair 70% Irritated 75%
Evidence	"Too tired to concentrate" For: "I usually feel tired on Mondays. I lost my keys last week." Against: "I just got a promotion, so I must be doing something right."
Alternative balanced thought	"I did get some sleep last night, and I usually can concentrate on my work."
Feeling	Despair 50% Irritated 60%

- Patient is educated to recognize inaccurate beliefs and maladaptive automatic thoughts
- Patients is taught to correct beliefs and thoughts

RELAXATION THERAPY

RELAXATION TECHNIQUES AID IN :-

- Reducing arousal associated with negative emotional response to sleep difficulty
- Reducing muscle tension
- Distracting from anxious ruminations regarding sleep difficulty

Relaxation techniques MUST be performed properly and practiced regularly!

Progressive Muscle Relaxation

- Acknowledges the association between anxiety, stressed state and muscle tension.
- Teaches how to relax muscle tension and thereby reduce anxiety.
- Involves a physical component of sequential tensing and relaxing of muscle groups
- Involves a mental component of focusing on the distinction between the feeling of tension and relaxation.

- Focus is on slowly tensing and then relaxing each muscle group.

- With eyes closed, start by tensing and relaxing the muscles in your toes and progressively work your way up to your legs, abdomen, chest, arms, neck, face and finally head.

- Try to tense each muscle group for 7-10 seconds then relax for 15-30 seconds before moving on to the next muscle group.

- Focus on how the muscles feel when tensed vs when relaxed
- It requires practice!!! – daily (or several times per day) for 15-20 minutes
- With practice, relaxation can be quickly achieved

Breathing Exercises/Abdominal breathing

- Voluntary, slow, deep breathing is thought to "reset" the ANS through synchronization of neural elements in the heart, lungs, cortex and limbic system

- Breathing exercises should be practised for 20 minutes per day for ∞2 weeks

- Once mastered, try at bedtime ONCE for 30mins. If no sleep, try again another night so as not to associate the exercise with sleep failure

- Lie in supine position, breathe normally and comfortably, focus on your breathing pattern
- Breathe more with your abdomen and less with your chest (it may help to place a hand over the diaphragm)
- Pause for a half second after each breath cycle (in, out) and evaluate the feeling of the breath
- Concentrate on where you best feel the air moving in and out and concentrate on that movement
- Visualize intrusive thoughts floating out with the out breath

Guided Imagery/Visualization

- Use mental images to take you to a calming place.
- Sit/lie in a quiet area, close your eyes, concentrate on your breathing and visualize being in a quiet, restful place
- Focus on the experience you are visualizing; incorporate all of your senses into the experience so as to transport yourself there.

PHARMACOLOGIC TREATMENT

- Benzodiazepines
- ‘Z’-drugs
- Melatonin -receptor Agonists
- orexin-receptor agonists
- Sedating antidepressants
- Antihistamines
- Melatonin supplements

AASM Guide to Pharmacologic management

- Use of medications in chronic insomnia rather than acute/transient
- Use of medications in persons unable to engage in CBT or in whom CBT not successful, or as **temporary** adjunct to CBT
- Aim should be short-term use of hypnotics
- Patients who ≥30 days of daily/near-daily hypnotics should be referred to a sleep specialist

Brain $GABA_A$ Receptor Function(s) are Distinguished by α Subunits

α_1	Sedation, amnesia, partial anticonvulsant, ataxia
α_2	Anxiolysis, myorelaxation
α_3	Myorelaxation, ataxia
α_5	Myorelaxation, ataxia

Mendelson WB et al. Sleep Medicine Reviews 2004;8(1):7-17

Benzodiazepines

- Activate GABA-BDZ binding sites of $GABA_A$-receptor to reduce neuronal firing
- Short-intermediate acting BDZs cause less daytime sedation and impairment
- Tolerance and dependence are problematic
- **Ideally** should not be used beyond 2week period

- Triazolam
- Tamazepam
- Estazolam
- lorazepam

‘Z’-drugs

- Non-benzodiazepine GABA agonists
- Indicated only for insomnia
- Less risk of tolerance and dependence
- Ideally use < 1month

- Zolpidem (Ambien)
- Eszopiclone (lunesta)
- Zalepon (sonata)

Tips on prescribing BDZs and Z-drugs

- Have an end-point in mind from the outset!

- Clearly and fully explain to patient:-
  - Risk of daytime sedation
  - Risk of mild cognitive deficits
  - Marked sedation and risk of respiratory depression if combined with alcohol or other sedatives
  - Risk of tolerance and dependence
  - Risk of withdrawal syndrome with sudden cessation

- Prescribe as adjunct to psychological and behavioural interventions

- For patients with Chronic insomnia, use of Z-drugs preferable to BDZs (↓risk of tolerance/dependence/withdrawal)

Melatonin-receptor Agonists

- Ramelteon (Rozarem)
- Specifically targets MT1 and MT2 receptors in SCN
- No evidence of tolerance/dependence
- Indicated in management of initial insomnia
- Risk of ↑testosterone, ↑prolactin

Orexin-receptor Antagonist

- Suvorexant (Belsomra) – first orexin-receptor antagonist
- Orexins are neuropeptides involved in promotion of wakefulness
- Recommended for sleep maintenance/middle insomnia

Antidepressants

- Trazodone:-
- Weak inhibitor of serotonin reuptake, antagonist of 5HT2A, 5HT2C receptors
- ↑total sleep time, ↓night-time awakenings
- Effective for treatment of insomnia with comorbid Depression
- Not recommended by AASM for primary insomnia
- Weak evidence to support use, based on AASM guidelines
- Harms may outweigh benefits

Antihistamines

- Diphendramine:-
- Not recommended by AASM
- Weak evidence to support its use
- Benefits do not outweigh harms

Melatonin

- Weak evidence to support its use – NOT recommended by AASM
- Most studies small/limited duration
- Some studies suggest role in the elderly – improved sleep latency
- One Double-blind, placebo-controlled trial found improved sleep quality in elderly treated with a supplement of melatonin 5mg, magnesium 225mg, zinc 11.25mg

EXERCISE

- Regular exercise thought to promote sleep
- Physical activity serves as an environmental zeitgeber
- Should be ≥6 hrs before bedtime; vigorous physical activity in the late evening can worsen insomnia
- Physical inactivity and excessive exercise are both associated with poor sleep

DIET AND NUTRITION

- Avoid caffeine in late afternoon/evening
- Avoid alcohol in the evening- promotes sleep initiation but disrupts later sleep stages and affects sleep maintenance
- Avoid large meals near bedtime

ALTERNATIVE THERAPIES

- Herbal remedies:-
  - Insufficient evidence
  - Valerian root may show some benefit in menopausal women with insomnia
- Acupressure:-
  - Some studies suggesting short term benefits
- Devices:-
  - CEREVE SLEEP SYSTEM
  - ↓sleep latency via cooling forehead

SPECIAL CONSIDERATIONS IN THE ELDERLY

Physiologic sleep changes in the elderly

- Sleep becomes more fragmented
- Prolonged latency of sleep onset
- Increased # of arousals during sleep
- Earlier morning waking
- Increased day time napping
- Decreased slow wave sleep
- More likely to have comorbidities/ be on medications that affect sleep

SPECIAL CONSIDERATIONS IN THE ELDERLY

- Psychological and behavioural interventions remain 1st line
- Hypnotics should be used cautiously and in lower doses
- Elderly metabolize and eliminate medications more slowly
- Greater risk for falls
- Greater risk for daytime somnolence and accidents
- Greater risk of confusion, cognitive impairment, paradoxical behaviours with hypnotics

Take Away Points

- Physicians should educate patients of the importance of good-quality sleep and avoidance of sleep-deprivation
- Insomnia, is a significant risk factor for increased morbidity and mortality and should not be overlooked
- Primary care physicians should be able to diagnose and manage transient/short term insomnia
- Comorbid disorders must be identified and managed
- CBT-I and other psychosocial interventions are first line management
- Hypnotic drugs **ideally** should be used as temporary adjuncts to psychosocial interventions

References

- Comorbidity of chronic insomnia with medical problems Taylor DJ, Mallory LJ, lichstein KL. Sleep. 2007, Feb 1; 30(2):213-8
- WHO Technical Meeting on Sleep and Health, Bonn Germany 22-24, Jan 2004
- American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, fifth edition. Arlington VA, American Psychiatric Association 2013
- Sleep duration and biomarkers of inflammation. Patel SR,Zhui X, Storfer-Isser A, Mehra R et al. Sleep 2009; 32(2):200-204
- Insomnia Treatment and Management. Chawla J. Medscape Neurology Sep 18, 2018
- https://aasm.org/resources/pdf/pharmacologictreatmentofinsomnia.pdf
- Cognitive behavioural therapy for primary insomnia. Edinger JD, Means MK. Clin Psychol. Review 2005 JUL; 25 (5): 539-58
- New Developments in Cognitive behavioural therapy as the 1st line treatment of insomnia. Stebern AT, Manber R. Psychol Res Behav Mang. 2011; 4:21-28
- Insomnia in the elderly. Monane M. J Clin Psychiatry 1992 Jun 53;suppl:23-8

RELAXATION THERAPY RESOURCES

- https://students.dartmouth.edu/wellness-center/wellness-mindfulness/relaxation-downloads
- https://www.uclahealth.org/marc/mindful-meditations