Managing Insomnia in your practice

Nick Kates MB.BS, FRCPC MCFP (hon)



Palais des congrès de Montréal THE COLLEGE OF FAMILY PHYSICIANS OF CANADA

Family Medicine Forum

Forum en médecine familiale

LE COLLÈGE DES MÉDECINS DE FAMILLE DU CANADA

Presenter Disclosure

Presenter: Nick Kates

Relationships with financial sponsors:

- Any direct financial relationships, including receipt of honoraria: None
- Membership on advisory boards or speakers' bureaus: None
- Patents for drugs or devices: None
- The presenter and presentation has received no financial support from any source
- Other

Plan for Today

- Why sleep is so important
- The sleep cycle
- Sleep Quality
- Assessing Insomnia
- Treating Insomnia



What is sleep?

Sleep is a dynamic and regulated set of behavioral and physiological states during which many processes vital to health and well-being take place.

- Learning and memory consolidation
- Balance ghrelin and leptin production
- Helps regulate insulin metabolism
- Promotes healing of some body structures
- Boosts the immune system
- Reduces cortisol levels
- Cleansing of beta-amyloid proteins associated with Alzheimer's
- Healthy brain development
- Protects against many chronic conditions

Sleep is an active and essential process



How much sleep do we need

- Average is 7-9 hours Great variation Minimum 6 hours
- Almost 45% of adults report not getting enough sleep.
- 10-15% report chronic insomnia
- 40% report daytime drowsiness
- 85% of teens get less than the minimum (8 hours)



- Getting less sleep by the year (sleep was originally driven just by natural light / dark)
- 51 Different genetic markers predicting sleep problems

Sleep needs vary over the life cycle

LIFE STAGE	DAILY SLEEP NEEDS
NEWBORNS (0-3 MONTHS)	14-17 hours
INFANTS (4-11 MONTHS)	12-15 hours
TODDLERS (1-2 YEARS)	11-14 hours
PRESCHOOLERS (3-5 YEARS)	10-13 hours
SCHOOL AGE (6-13 YEARS)	9-11 hours
TEENAGERS (14-17 YEARS)	8-10 hours
YOUNGER ADULTS (18-25)	7-9 hours
ADULTS (26-64)	7-9 hours
OLDER ADULTS (65+)	7-8 hours

Consequences of insufficient sleep



Health Consequences of Inadequate or Poor Sleep

- Diabetes (night owls)
- Obesity (Ghrelin and Leptin)
- Childhood obesity if less than 10 hours
- GI problems especially reflux
- Cardiovascular Problems
- Memory impairment / Alzheimers
- Mood changes
- Inattention and decreased reaction time
- Increased pain sensitivity
- Infertility
- Cancer eg oesophageal cancer



Cognitive impacts of sleep deprivation

- Involuntary microsleeps occur.
- Attention to intensive performance is unstable, with increased errors of omission and commission.
- Cognitive slowing occurs in self-paced tasks.
- Time pressure increases cognitive errors.
- Response time slows.
- Performance declines in short-term recall of working memory.
- Performance requiring divergent thinking deteriorates.
- Learning (acquisition) of cognitive tasks is reduced.
- An increase in response suppression errors in tasks requiring normal primarily prefrontal cortex function.
- Compensatory efforts to remain behaviorally effective are increased.
- Although tasks may be done well, performance deteriorates as tasks duration increases



Physician Performance is Compromised

- 30% of physicians self-report chronic insomnia or another sleep problem
- Lack of sleep is also associated with burnout, and leads to increased psychological distress and decreased job satisfaction
- An NIH study of surgeons found that after 18 or more hours without sleep there was
 - 36% increase in medication errors
 - 5x as many diagnostic errors
 - 2x as many attention lapses
 - 61% more injuries from needles



• With less than < 4 hours sleep the night before your functioning is impaired to the same extent as if you had a blood alcohol level of > 0.08%

Safety is compromised

- 51% of adults report driving drowsy;
- 17% dozed off at the wheel (microsleeps)
- 2013 10,000 sleep-related crashes
 - 150 fatalities
 - 4,000 injuries
- 27% report being sleepy at work at least 2 days / week
- 19% report making errors at work
- 2% report being injured
- Hypnotic Drug Dependence

















How do we sleep The Sleep Cycle



The Stages of Sleep

- Stage 1- Transition to sleep, 5% of total time
- Stage 2- Light Non-REM sleep 50% of total time
 - Memory restoration and moving
 - Muscle skills enhancement
- Stage 3 & 4- Deep, slow wave Non-REM sleep, Most restorative sleep 45% of total time
 - Storing memories
 - Trimming synapses
 - Moving memories within the brain
 - Cleansing the brain
- REM Rapid eye movement When we dream 25% of total time Stage 2
 - Originates within the pre-frontal cortex
 - Divorces memories from emotional charge
 - Creates new neural connections that contribute to
 - Cognitive functioning
 - Emotional intelligence
 - Memory integration
 - Creativity
 - Insight and problem solving
 - New neural

Stage 1

Stage 4

Awake

REM

Rapid Eye Movement (REM) Sleep

- Brain waves increase to the awake level
- 3-5 cycles a night and most dreams occur during this stage
- Physical changes occur during REM
 O Increase in H.R., B.P., and breathing rate
 O Breathing more shallow and irregular
 - O Eyes jerk rapidly (REM)
 - O Limb muscles temporarily paralyzed
 - O Some loss of temperature regulation
 - O Testosterone release
- Infants spend 50% of time in REM
- Progressively spend less time in REM as we age
- Supressed by Alcohol, CBD, antidepressants





MIND (HELP

Signs Of REM Sleep

• Disrupted REM sleep in pregnancy may lead to ASD / ADHD



Sleep and the older patient

- Fragmented
- Less deep sleep
- Less REM sleep



- Harder to store, integrate and recall memories
- Decreased sleep efficiency
- Circadian rhythm moves (back) earlier
- Decreased cognitive performance with less sleep
- Areas that drive deep sleep are also the areas that are most likely to show degeneration (ie Alzheimers)

Sleep and Dementia

• Linked to insufficient Non-REM sleep

• Changes in Non-REM sleep pre-date dementia – could be a marker

 Beta-amyloid (causes typical plaques) and other proteins are removed during sleep by the glymphatic system





Glymphatic system

- Series of channels which circulate throughout the brain
- Includes CSF and drains into lymphatic system
- Nerve cells enlarge during the day
- Perivascular space expands at night
- ? Switched on / off by noradrenaline



- May also be related to brain nourishment glucose, lipids, fatty acids, neurotransmitters (microbiome)
- Reduced glymphatic activity is seen in all neurodegenerative conditions and in the elderly
- May be one reason why we sleep



Two processes control our sleep cycle

Sleep Homeostasis

- Pressure to sleep increases during the day until an internal threshold is crossed causing sleep to occur
- Adenosine and Orexin balance drives this - Caffeine reduces adenosine levels
- Waking occurs when homeostatic drive decreases sufficiently to cross opposite threshold







Our Circadian Rhythms

- Cyclical changes driven by an internal "biological clock" located in the suprachiasmatic nucleus (SCN)
- Synchronised to the external environment
- Advanced Sleep phase disorder
 - Light Therapy in the evening
- Delayed sleep phase disorder
 - Light therapy in the morning



Many Teens Naturally Experience a Shift to a Later Sleep-Wake Cycle

 The biological clocks of children shift during adolescence, with a later bed time (around 11:00 pm) and a later wake time.

• Melatonin release less and later

• Can create conflict with their schedules - particularly early school start times.

Try melatonin 1-2 mgm, 5 hours before bed



Our Circadian Rhythms

- Cyclical changes driven by an internal "biological clock" located in the suprachiasmatic nucleus (SCN)
- Synchronised to the external environment
- Advanced Sleep phase disorder
 - Light Therapy in the evening
- Delayed sleep phase disorder
 - Light therapy in the morning
- Red light can aid sleep, warm tones relax
- Blue and white light make it harder to sleep - suppress melatonin
- No demonstrated benefit from blue light blocking glasses



Sleep Wake Cycle: Two Process Model

Homeostatic Sleep Drive



Circadian Alerting Signal *(SCN)*

2 Common Circadian Disruptions

Shift Work

Jet Lag



Working evening, night, irregular or rotating shifts Traveling across time zones disrupts sleep

Napping – 20 minutes or less







Tip - Drinking a cup of black coffee immediately before napping can leave you more alert when you wake up

What affects the Quality of our sleep

Quality of Sleep

Contributing Factors

- Sleep patterns
- Sleep habits
- Environmental factors

 Other potential causes (psychosocial factors)



"Mom likes to have their bed made by seven. Dad doesn't wake up till eight."

Ways to Measure Sleep Quality

Total amount of sleep

Nap times



- Sleep efficiency
 - Total time asleep divided by total time in bed
 - Aiming for 85%

• Sleep latency - Can be too long or too short

Spoon - Tray Sleep Latency Test



Types of sleep problems



Types of Sleep Problems

≻ Insomnia

Sleep-related breathing disorders

Obstructive / central sleep apnea

Sleep-related movement disorders

Restless leg syndrome, periodic limb movement disorder (Fe, Gabapentin, Pregabalin, Clonazepam Dopamine agonists)

Circadian rhythm sleep-wake disorders

□ Jet lag or shift work

Delayed or advanced sleep-phase syndrome

> Hypersomnias

Narcolepsy

> Parasomnias related to sleep cycle disruption

Arousal

Parasomnias

- Night terrors
- Sleepwalking
- Sleep talking

REM

- REM sleep behaviour disorder
- Nightmares
- Sleep paralysis

Other

- Nocturnal Sleep-related Eating Disorder
- > Bruxism (teeth grinding)





- 3-5 % of adults Male, obese, over 50, family Hx
 - Central or Obstructive
 - Snoring
 - Restless
 - Wake with panic symptoms
 - Day-time sleepiness
 - Erectile Dysfunction
- Can contribute to obesity, cognitive changes, hypertension, MI
- 2% of children
 - Snoring
 - Tonsils
- Polysomnography Measures apneic episodes per hour.
 - 5 14 = mild
 - 14 29 = Moderate
 - >30 = Severe (Can't drive unless its being treated)
- Increase in white matter hyperintensities

Sleep Apnoea





Treatment options for Sleep Apnea

- Behavioral Therapy
 - Avoid alcohol, nicotine and sleep medications
 - Lose weight if overweight
- Sleep posture (sleep noodle)
- CPAP (Continuous Positive Airway Pressure)
- BPAP Higher pressure when you inhale
- Dental appliance










Hypoglossal nerve stimulator

Implant

- Sensor
- Stimulus generator
- Stimulation cuff
- Remote control
- Breathing cause the generator to trigger an impulse
- The generator is connected to the hypoglossal nerve
- This causes the tongue to elevate and open the airway
- The remote control can change the strength of the impulse
- Better tolerated than CPAP





Insomnia



Insomnia is Inadequate or Poor Quality Sleep Can be any or all of:

Difficulty falling asleep



- Frequent awakenings during the night
- Waking too early and being unable to go back to sleep
- Unrefreshed or non-restorative sleep
- Daytime sleepiness or deficits in functioning (differentiate from fatigue)

Types of Insomnia

Primary – Transient, Short-term or Long-term

- Psychophysiological
- Adjustment / Situational
- Poor sleep hygiene
- Idiopathic
- Secondary
 - Drugs
 - Medical conditions
 - Psychiatric Disorders
 - Substance use



Assessment of insomnia

- Suspect / Ask Screening questions
- Rule out
 - Medical condition
 - Medication effects
 - Psychiatric disorder
 - Substance Misuse
 - Stressors / changes that may be interfering with sleep
- Assess quality of sleep and sleep habits
- Measure / Track Sleep log / Rating scale
- **Refer** if help is needed with a diagnosis or plan





Suspect / Ask



- Are you content with your sleep? Do you feel refreshed on waking (insomnia)
- Are you excessively sleepy during the day? (May also suggest narcolepsy, primary hypersomnia and obstructive apnea)
- Does your bedpartner (or parent) complain about your sleep? (parasomnias, sleep apnoea and RLS)



- Screening questions / ask
- Assess quality of sleep and sleep habits

- How much sleep do you get and when (sleep patterns)
- What activities occur before and after going to (sleep habits)



- Do any environmental factors affect your sleep
- Are there things you do during the day that might affect your sleep (caffeine, alcohol, exercise, diet)



- Screening questions / ask
- Assess quality of sleep and sleep habits
- Rule out
 - Medical condition
 - Medication effects
 - Psychiatric disorder
 - Substance misuse
 - Stressors / changes that may be interfering with sleep





Medical Conditions Contributing to Insomnia

- Hyperthyroidism
- Arthritis or any other chronic painful condition
- Chronic lung or kidney disease
- Cardiovascular disease (heart failure, CAD)
- Heartburn (GERD)
- Neurological disorders (epilepsy, Alzheimer's, headaches, stroke, tumors, Parkinson's Disease)
- Diabetes
- Menopause/Menstrual disorders
- Autism Spectrum Disorders
- Depression, Anxiety, BAD, Psychotic disorders, Substance use



Medications Contributing to Insomnia

- Alcohol
- Caffeine/chocolate
- Nicotine/nicotine patch
- Beta blockers
- Calcium channel blockers
- Bronchodilators





- Corticosteroids
- Decongestants
- Antidepressants
- Thyroid hormones
- Anticonvulsants
- Anti-hypertensives
- Stimulants

- Screening questions / ask
- Assess quality of sleep and sleep habits
- Rule out
 - Medical condition
 - Medication effects
 - Psychiatric disorder
 - Substance misuse





- Stressors / changes that may be interfering with sleep
- Measure / Track Sleep log / Rating scale

Common Investigations

• Epworth Sleepiness Scale

Sleep Log / Diary

Polysomnography

EPWORTH SLEEPINESS SCALE FORM

Instructions: Be as truthful as possible. Print the form. Read the situation in the first column; select your response from the second column; enter that number in the third column. Total all of the entries in the third column and enter the total in the last box.

Situation	Responses	Score
Sitting and Reading	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
Watching Television	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
Sitting inactive in a public place, for example, a theater or a meeting	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
As a passenger in a car for an hour without a break	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
Lying down to rest in the afternoon	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
Sitting and talking to someone	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
Sitting quietly after lunch when you've had no alcohol	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
In a car while stopped in traffic	0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing	
TOTAL SCORE		

A score of 10 or greater indicates a possible sleep disorder. Take the completed form to your doctor



																		-													
urer	G		E			D	0	-	•	2	A	C	1			D)	TH of	J	AN	F	EB	3	MAR		API	ł	MA	Y	JL	IN
-0	0					r		U	ŋ	S.	A	e		91		R	6	NON	J	UL	A	UG		SEP		001	r	NO	v	DI	EC
2					3			23										-												Z	
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
7 PM																															
8 PM																															
9 PM																									1						
10 PM																															
11 PM																															
12 PM				1																											
1 AM																															
2 AM																							13								
3 AM										1																					
4 AM																															
5 AM																															
6 AM																															
7 AM																															
8 AM																															
9 AM																															
TOTAL																	1.2														

Sleep Diary: MORNING Complete each morning



The Sleep Council	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Day of the week							
What time did you go to bed last night?							
What time did you wake this morning?							
How long did it take you to first fall asleep (in minutes)?							
Did you fall asleep: Easily After some time With difficulty							
How many times did you wake in the night?							
How long were you awake during the night in total?							
How long did you sleep last night in total?							
What disturbed your sleep? (physical or mental factors such as stress, worry, noise, lights, comfort etc)							
How would you rate your quality of sleep from 1-5? (with 1 being very poor and 5 being very good)							
How do you feel this morning: Refreshed OK Lethargic							
Any other notes							



Throughout the day have

Unable to concentrate

In the hour before bed what has your bedtime routine included?

you felt any of the following: Grumpy Impatient Tired Moody

Sleep Diary: **ÈND OF DAY**

P2 600	Complete at the e	end of the day						
The Sleep Council	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	
Day of the week								
How many caffeinated drinks did you have BEFORE 5pm?								
How many caffeinated drinks did you have AFTER 5pm?								
How many alcohol units did you have BEFORE 5pm?								
How many alcohol units did you have AFTER 5pm?								
In minutes, how much exercise did you do today BEFORE 9pm?								
In minutes, how much exercise did you do today AFTER 9pm?								
Have you taken any medications today? And if so, what.								
Did you have a nap during the day or evening and for how long? (in minutes)								

- Screening questions / ask
- Assess quality of sleep and sleep habits
- Rule out
 - Medical condition
 - Medication effects
 - Psychiatric disorder
 - Substance misuse
 - Stressors / changes that may be interfering with sleep
- Sleep log / Rating scale
- Refer if help is needed with a diagnosis or

management of a chronic sleep problem



Treatment of insomnia

Treatment of Insomnia

- Education about sleep
- Sleep hygiene
- Cognitive and Behavior Therapy (CBTI)



- Non-prescription sleep aids
- Prescription medications



Sleep Education

- Importance of sleep
 - Mental health
 - Physical health
 - Other consequences
- Sleep cycle
- Dispel sleep myths
- Benefits or otherwise of sleep medication
- Alternatives to sleep medication
- Making it a priority (readiness for change)



Web Sites providing lists of free Sleep apps

<u>https://positiveroutines.com/free-sleep-apps/</u>

https://www.womenshealthmag.com/uk/health/sleep/g25458488/ best-apps-insomnia/

https://www.goodhousekeeping.com/health/wellness/g26963663 /best-sleep-apps/

https://www.wellandgood.com/best-sleep-apps/

Sleep Hygiene

• A consistent sleep schedule

• Napping is kept to a minimum

• A nightly routine avoiding things that may interfere with sleep

• Healthy daily habits

• A bedroom environment that is conducive to sleep



Set a consistent sleep schedule

- Have a regular sleep time
- Have a fixed wake-up time
- Priorise sleep
- Make gradual adjustments



Don't overdo naps

- Brief naps (usually less than 20 minutes)
- Restrict to early afternoon



Follow a nightly routine

- Keep your routine constant
- Allow 30 minutes to wind down before bed
- Dim your lights
- Unplug electronics
- Use relaxation techniques
- Don't toss and turn



Bed Time Routine

- Hot herbal tea or warm milk
- Read or listen to books on tape
- Crossword puzzle, Sudoku or knitting
- Relaxing music
- Comfortable sleep wear
- Use the bathroom
- Scents (lavender, vanilla) may also reduce cognitive decline
- Deal with your worries before bedtime
 - Plan for the next day before bedtime
 - Set a worry time earlier in the evening
- Journaling
 - Writing down things you can't get out of your head
 - Make a list of things you are worried about or need to do that might keep you up at night.
 - Turn the page before you go to bed



Cultivate Healthy Daily Habits

Incorporate positive activities during the day

- Be physically active
- Get daylight exposure
- Don't smoke
- Reduce alcohol consumption



- Don't eat late
- Restrict in-bed activities



Optimise your sleep / Bedroom Environment

- Have a comfortable mattress, pillow and bedding
- Have comfortable sleep wear
- Set a cooler but comfortable temperature
- Block out light
- Turn off all screens
- Drown out noise
- Try calming scents (lavender)
- Use a weighted blanket







HEALTH SCIENCES Continuing Health Sciences Education



CBT for insomnia (CBTI)









Efficacy Of CBT For Insomnia

Comparative Efficacy: CBT-I for Sleep Maintenance Difficulties



CBT for Insomnia

- Cognitive restructuring
- Stimulus Control
- Sleep restriction
- Relaxation
- Paradoxical intention



Cognitive Restructuring

- Identify thought processes that contribute to sleep anxiety
- Identify erroneous beliefs about sleep
 - Challenge their veracity
 - Substitute more appropriate thoughts
- Includes self-talk and distraction
- Hide the face of the alarm clock
- Postpone worry episodes
- Journaling



Stimulus Control

• Insomnia is a conditioned / learned response to factors that interfere with the natural sleep patterns

• The goal is to break this cycle

• Promote a consistent sleep / wake cycle

• Re-associate the bedroom with sleeping

• Well established stand alone treatment



Stimulus control therapy

- Use the bedroom for sex and sleep only
- Go to bed only when sleepy
- Don't spend time wide awake in the bedroom
- Leave the bedroom if awake for more than 20 minutes
- Return to bed only when sleepy
- Repeat if necessary
- Do not nap during the day
- Get up at the same time every morning



Relaxation

- Plan a quiet / relaxation time before bed to deactivate the arousal system
- Develop a bedtime routine
- Relaxation Therapy:
 - Progressive muscle relaxation
 - Meditation
 - Imagery training
 - Diaphragmatic breathing





- Breathing exercise
- Based on Yoga Principles
- Exhale through your mouth with a whooshing sound
- Tip of tongue against top of upper teeth
- Inhale for 4 counts through the nose
- Hold your breath for 7 counts
- Exhale through your mouth for 8 counts
- Repeat 3 times



Practice sitting up first

Non-Prescription Sleeping Aids

Home	Remedies for Insomnia Toxo Cumin is a culinary spice with medicinal properties that aid in digestion.
*	Nutmeg has sedative properties and works as a natural sleep aid.
	Saffron also has mild sedative properties that help treat insomnia.
-	Due to its long history as a sleeping aid, chamomile tea is a well-known natural home remedy for insomnia.
1	Eating a banana can be useful in combating insomnia because it contains an amino acid called tryptophan.
()	Warm milk is an excellent home remedy to relax your mind and body.
	Fenugreek reduces anxiety, insomnia, and dizziness.
	Valerian is a medicinal herb with sedative and muscle relaxing properties.
P	Taking a hot bath or shower about two hours before going to bed can be of great help in treating insomnia.
	Apple cider vinegar contains amino acids that relieve fatigue. Top10HomeRemedies.com



nixtastock com - 74216489

CHAMOMILE

CATNIP
Herbal Remedies

- Valerian Root
- Barley Grass Powder
- Passion Flower
- Lemon Balm
- Ashwagandha
- Lavender
- Hops
- Chamomile





Other Foods to Consider before bedtime

- Walnuts
- Tart Cherry Juice
- Bananas
- Turkey
- Fatty Fish
- Almonds
- Kiwi Fruit













Over the Counter options

- Antihistamines (Diphenhydramine 25 50 mgm)
 - Can cause mental & cognitive changes, motor impairment
 - Sedation may carry over until daytime
- Melatonin (1-10mgm)
 - MI (hypnosis) M2 (circadian rhythm) M3 (retina)
 - May improve sleep onset + maintenance
 - Variation in purity
- Natural Light / Light box
- Prebiotics
 - Fibres that promote microbe growth in the gut: Increases short chain fatty acids





Foods that are high in prebiotics (undissolved fibres)

- Onions
- Garlic
- Asparagus
- Oats (Bran)
- Leeks
- Lentils
- Jerusalem artichokes
- Unripe bananas
- Apples
- Flax seeds



















Medication for Insomnia







Medications to consider

- BZD agonists (z-drugs)
 - Zolpidem 5-15 mgm
 - Zopiclone 2.5 10 mgm
 - Zaleplon 5-20mgm
- Benzodiazepines
 - Temazepam 7.5 30 mgm
 - Lorazepam 0.5 1.0 mgm
 - Alprazolam 0.25 1.0 mgm
- Anti-depressants
 - Doxepin 3-6 mgm
 - Trazodone 25-100 mgm
 - Amitriptyline 25 100mgm
 - Mirtazapine 7.5 15 mgm
- Orexin-Receptor Antagonists
 - Lemborexant 5 –10mgm

- Neuroleptics
 - Quetiapine 25-100 mgm
 - Loxapine 10 20 mgm
- **Gabapentin** 600 1800 mgm
- Prazosin 1-7 mgm
- Pregabalin 75 300 mgm
- **Clonidine** 0.1 0.3 mgm
- (Melatonin agonists)
 - Ramelteon 8mgm





Cannabis and sleep

- Low-dose cannabis use appears to decrease sleep onset latency
- But it also
 - Decreases REM sleep (less dreaming).
 - Chronic use leads to suppression of slow wave sleep.
- Slow wave sleep most restorative so cannabis can reduce sleep quality



Choice of Agent 2017 AASM Guidelines

Sleep Onset Insomnia

- Zolpidem
- (Ramelteon)
- Temazepam
- Zopiclone
- Lorazepam

Sleep Maintenance Insomnia

- Doxepin
- Zopiclone
- Temazepam
- Zolpidem
- Lamborexant
- Lorazepam
- Trazodone



Choice of Agent

Seniors

- Doxepin
- Zolpidem / Zopiclone
- Trazodone
- Temazepam / Lorazepam
- Melatonin



Pain

- Gabapentin
- Nortriptylene
- Duloxitene
- Temazepam / Lorazepam
- Zolpidem / Zopiclone
- Topirimate
- Trazodone
- Pregabalin



Guidelines when using medication

Manage the relationship

- Don't feel pressured into doing "something"
- Education ie re tolerance / psychological dependency
- Clear contract ie duration
- Sleep hygiene and CBTI first or in combination



➢Use the minimum effective dose

Watch for psychological dependency

Guidelines when using medication

- Review potential side effects, especially daytime sleepiness
- Be aware of drug interactions and contraindications
- Look for rebound insomnia after discontinuation



Consider intermittent use if long-term therapy is required

Consider consultation with a sleep specialist before starting continuous, long-term therapy with hypnotic medication

Duration of Therapy

- Avoid prolonged or excessive therapy
- Discuss risks and benefits of drug therapy and alternatives
- Agree on the plan / duration beforehand

Continuous therapy

- Try to limit to 1-2 months start with 2 weeks
- Conduct periodic tapering and discontinuation trials to determine when continuous therapy can be stopped

As-needed therapy

- Ideally limit to 6 months for a BZD can be longer for others
- Primarily for patients who can assess when a drug is needed





In Summary.....

- Sleep is an active process Not just "not awake"
- Important for physical and emotional wellbeing
- Part of the integrated treatment of all problems
- Needs to be seen as a priority, not the first thing to sacrifice
- Can be very hard to treat
- Give the person options / choices so they feel in control
- Always include tips for sleep hygiene
- Start with CBTI
- Not much evidence about the effectiveness of medications
- Keep drug therapy brief
- Look after your own sleep



Things you can do to help your sleep

While there is no single thing you can do that will guarantee a good night's sleep, doing some or all of these will help you to improve your sleep. But you need patience as some of these can take a week or two before you see their benefits

1) Maximise the time you spend in daylight during the day

2) Increase your physical activity during the day

3) Have a consistent bed time and bedtime routine

4) Create a cool, comfortable sleep friendly environment, including your mattress & pillows, and block out light and noise if it disturbs your sleep

5) Avoid using electronic screens (blue light) in the bedroom or in the hour before bed

6) Avoid caffeine, alcohol, large meals and strenuous physical activity in the 3 hours before bedtime

7) Use simple relaxation exercises such as 4-7-8 just before bed. Breathe out and then breathe in through your nose as you count to 4, hold your breath and count to 7, and exhale and count to 8. Repeat this 3 times.

8) Keep naps to a minimum – and for no more than 20 minutes

9) If you can't get to sleep don't fight it. Get up and do something relaxing and return to bed when you're feeling sleepy

10) Eat 2 kiwi fruits before bedtime

11) Use **pre**biotics (during the day) – foods that contain them (onions, leeks, garlic, green bananas, apples, oats, flax seeds, asparagus, Jerusalem artichokes, lentils) or capsules / powder

MAKE SLEEP A PRIORITY IN YOUR LIFE AND ADJUST YOUR OTHER ROUTINES WHERE NECESSARY. DON'T ALWAYS SACRIFICE SLEEP TO ENABLE YOU TO MEET YOUR OTHER COMMITMENTS

nkates@mcmaster.ca