Insomnia in Older Adults

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OBJECTIVES

At the end of this session participants will be able to:

1. Define ”insomnia”

2. List 3 risk factors for insomnia in older adults (OA)

3. Identify two nonpharmacologic and two pharmacologic interventions for OA w/insomnia

Insomnia “definitions”:

- Taking longer than 30 minutes to fall asleep
  - (initial insomnia/onset/latency)
- Waking more than 3 times a night/prolonged awakenings
  - (middle insomnia /sleep maintenance)*
- Staying asleep for less than 6 hours
  - (late insomnia/early morning awakenings)
- Experiencing sleep that is chronically nonrestorative or poor in quality.

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Per DSM-5 criteria

- Occurs 3 or more nights/week
- Associated w/impaired daily function (fatigue, daytime sleepiness, poor concentration)

* Older adults experience this MORE than younger adults

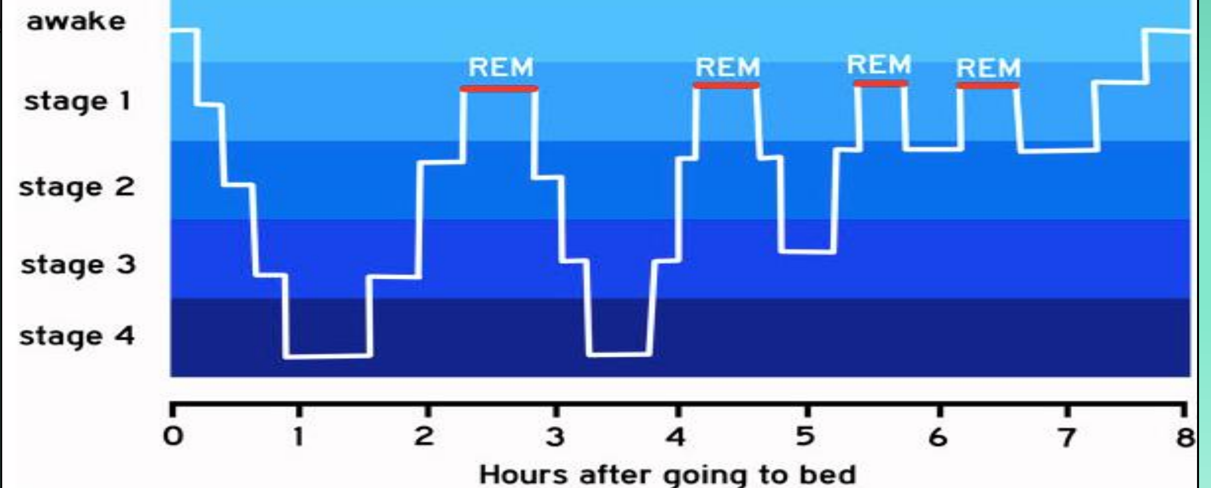
CASE

- 82 -year-old male resident of a Residential Care Home, with a medical history of diabetes, dementia, enlarged prostate, arthritis in knees. He moved to the residence from his daughter's home 1 month ago.
- He goes to bed around 7:30pm but "*can't fall asleep*" so he watches TV until 11pm. He is getting up frequently during the night , disturbing other residents when he uses the bathroom. He seems to be sound asleep at 8 am when you try to get him up for breakfast.
- He is complaining a lot to you, and states he needs *"a nap for an hour or so"* after breakfast and again after lunch. He frequently *"refuses"* to go to appointments because he is *"too tired".*

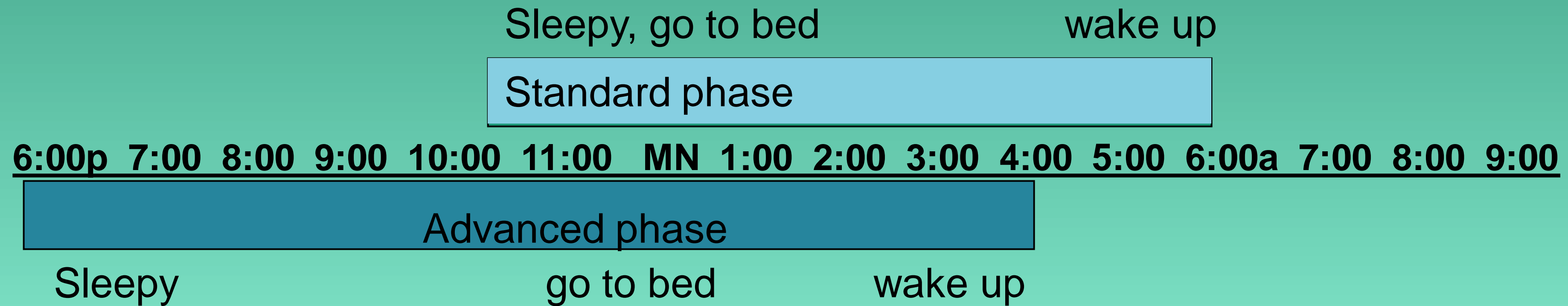
INSOMNIA in OLDER ADULTS

- *Does this man have a sleep problem?*
- *Why can't he fall asleep at night?*
- *Why does he keep waking up during the night?*
- *Why is he so sleepy in the morning and during the day?*

SLEEP STAGES and CYCLE



Circadian Rhythm Changes in older adults



AGE RELATED CHANGES IN SLEEP

SLEEP CHARACTERISTIC	AGE RELATED CHANGES
Total sleep time	decreased
Sleep latency (time to fall asleep)	Increase or NO change
Sleep efficiency (time asleep over time in bed)	decrease ← Dementia
Daytime napping	Increase
Stages N1 and N2	Increased ← Dementia
Stage N3 (SLOW WAVE SLEEP)	decrease
Percent REM sleep	decrease
Nighttime awakenings	Increase ← Dementia

OLDER ADULTS SLEEP FACTS

- About 50% of older adults reports sleep problems
  - Insomnia IS **NOT** a normal part of getting older
- MORE TROUBLE FALLING ASLEEP and STAYING ASLEEP

- Spend LESS time in DEEP and REM sleep

  MORE time in lighter sleep stages
- WAKE UP MORE FREQUENTLY

  Interrupts sleep cycle-> " feel **less** rested"
- Older adults sleep between 6-8 hours per 24 hour period

Evaluation of Sleep

1. SCREENING QUESTIONS

- Is the person satisfied with his or her sleep?
- Does sleep or fatigue interfere with daytime activities?
- Does the bed partner or others complain of unusual behavior during sleep, such as snoring, interrupted breathing, or leg movements?

2. REVIEW Medical history ,Rx -OTC Medications/ROS

3. FOCUSED PHYSICAL EXAM w/

MS test/Depression screen

4. Ask to keep a sleep log for 1-2weeks

5. Further testing:

- Polysomnography if indicated

OBSERVE PATTERNS

INSOMNIA

- How many hours spent sleeping in 24 hours
- Exercise How much, when
- TIME WAKES UP for the DAY
- How much time in bed NOT SLEEPING
- TIME GOES TO BED
- NAPS : how many when
- Sunlight exposure
- Eating and drinking: Caffeine?
- PM: Watching TV or using computer or phone

Risk factors for insomnia

Category	Risk factors
ENVIRONMENT	• Excessive noise, temperature of room, • too many lights on. • Hospitalization • Moving to new home or facility
BEHAVIORS	• Going to bed at different times • Caffeine later in day • Alcohol use near bedtime • Death of friend or family • Lifestyle change (retirement) • Napping
MEDICAL	• Medications • Sleep problems : sleep apnea, restless leg, PLM • Dementia • Depression • Anxiety • Diabetes • Heart diseases • Strokes • Pain • Parkinson’s /MSA/LBD

Next steps in evaluation of insomnia?

#2. **MEDICAL CONDITIONS:**

- Diabetes,
- Prostate gland,
- Infections,
- Dry skin,
- Constipation,
- Dementia,
- Parkinson's Disease, LBD, MSA
- PTSD
- GERD
- Pressure sores
- Dysphagia
- Post -nasal drip
- Osteoarthritis

❖ Are his medical conditions "under control"?

❖ Does he have untreated PAIN?

❖ Is he DEPRESSED or ANXIOUS?

#3. Check for signs/symptoms:

- Restless leg syndrome
- Periodic Limb Movement
- Sleep apnea

#4. REVIEW MEDICATIONS

- Is he taking a diuretic or Corticosteroid or Albuterol inhaler, Acetylcholinestase inhibitor?
- ARE there side effects to medications?

HOW DO WE MANAGE SLEEP PROBLEMS?
Non pharmacologic is THE BEST WAY!!!

1. Sleep hygiene
2. Stimulus control
3. Sleep restriction*
4. Cognitive therapy*
5. Paradoxical intention*

* supervision of doctor or therapist

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Non-pharmacological Treatment of Insomnia- *How well does it work?*

- Improve symptoms in 70-80% of patients with primary insomnia

- **Effects last at least 6 months after treatment completed**

Non-pharmacological Management

1. SLEEP HYGIENE

<u>Helps with falling asleep and staying asleep</u>

- This is educating the person or caregiver about health and environmental practices that can affect sleep

- USED in combination with other sleep techniques

-Light therapy */socialization/exercise during the day

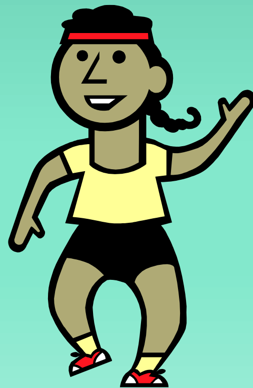
- Useful in persons with dementia

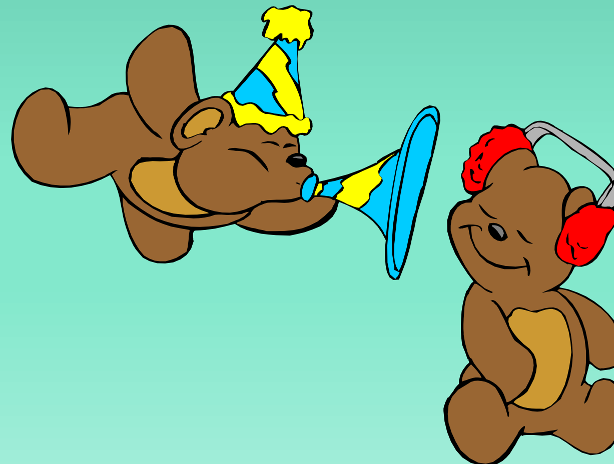
*Improves circadian rhythm and establish healthy sleep-wake cycle

1. Sleep Hygiene

- **Health Factors**
  - Diet
  - Exercise
  - Substance use
  - Pain
  - Trouble swallowing
  - Symptoms of medical problems

- **Environmental Factors**
  - Light
  - Noise
  - Room temperature
  - Mattress





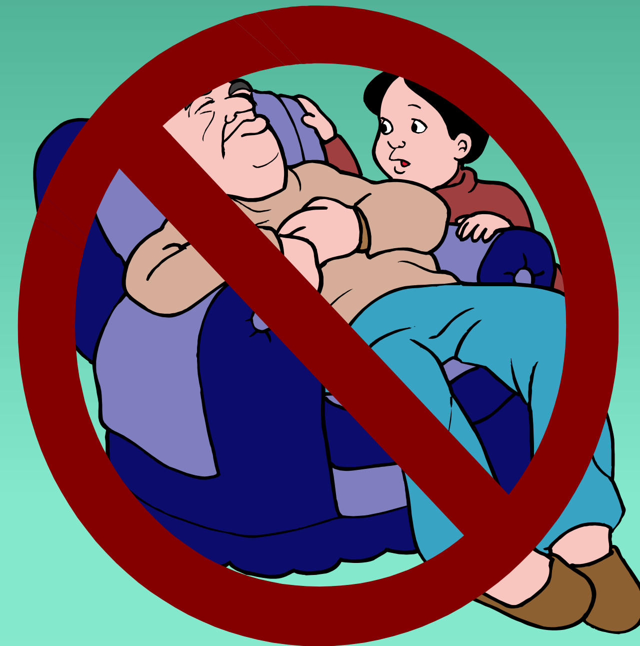
Non-Pharmacological Management

2. STIMULUS CONTROL:

Cues the body /mind for SLEEP

Helps with getting to sleep (latency)

- Go to bed when sleepy
- Use the bed only for sleep
- Establish bedtime routines
- Regular morning rise time
- Avoid napping or LONG naps (over 30 minutes)



Non-Pharmacological Management

3. SLEEP RESTRICTION*

- ***Helps with MIDDLE OF NIGHT AWAKENINGS***
- ***Improves sleep efficacy***

- GOAL: ANY TIME person is in bed is SPENT SLEEPING !!!

- EXAMPLE :
- If someone goes to bed at 11 pm and gets up in morning at 8 am (9 hours) but keeps waking up so only gets 6 hours of actual sleep-
- **Intervention= ONLY** let person go to bed at 12 and get up at 6 am (6 hours)

- Next step: **IF sleeping thru night** , then can let go to bed EARLIER (15-30min)

- **Wake time is constant**, bedtime adjusted gradually

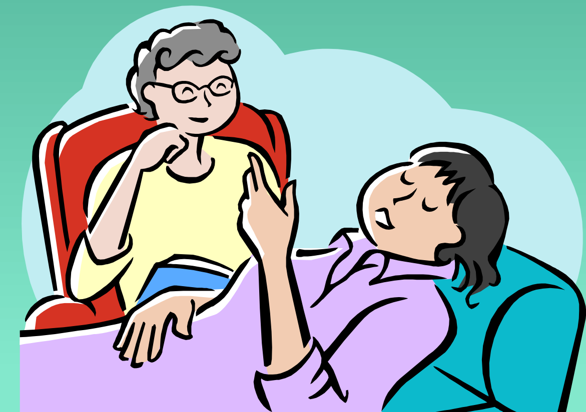
- Allows short afternoon naps (<30 minutes)

Non-Pharmacological Management

#4.COGNITIVE BEHAVIORAL THERAPY

Helps with psychologic problems interfering with sleep

- Involves identifying dysfunctional beliefs and attitudes about sleep and replaces them with WAYS TO HELP THEM ADAPT
- Helps minimize anticipatory anxiety and arousal
- Teach "RELAXATION" Techniques



#5 PARADOXICAL INTENTION: helps with falling asleep

- Reduces performance anxiety about falling asleep by instructing patients to do the opposite
- - GET INTO BED AND STAY AWAKE!
- Engaging in the most feared behavior, staying awake, performance anxiety related to trying to fall asleep slowly diminishes.

Pharmacologic treatments for "sleep problems"
NOT reccommended for long term use

PRESCRIPTION

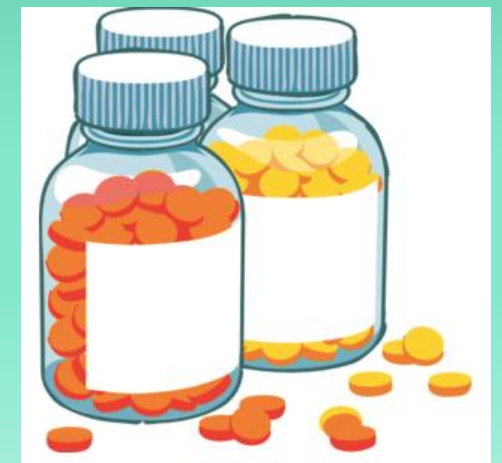
Selection based on UNDERLYING PROBLEM

(latency/maintenance)

OVER THE COUNTER (non- prescription)

- Melatonin : **start LOW** (higher doses = incr. Side effects)
- Antihistamines- diphenhydramine/doxylamine***
- Herbal preparations
  - Valerian Root (GABA release)
  - Chamomile (apogenin binds BDZ receptors)
  - Kava (hepatotoxicity)

***anticholinergic**



PRESCRIPTION MEDICATIONS FOR INSOMNIA

Class, Medication	Starting Dose (mg)	Usual Dose (mg)	Estimated Half-Life (Hours)	Comments
Intermediate-acting benzodiazepine				
Te[illegible]n	7.5	7.5–15	8.8	Psychomotor impairment, increased risk of falls. Caution suggested because of adverse cognitive and psychomotor effects in older adults. Guidelines recommend avoiding use in older adults.
Short-acting nonbenzodiazepines				
Eszopiclone	1	1–2	6	Increased risk of falls; may be associated with unpleasant taste, headache. Avoid administration with high-fat meal. Evidence for next-day impairment of driving skills prompted lowering of recommended starting dose, especially in women.
Zaleplon	5	5–10	1	Increased risk of falls; occasional adverse effects include headache, dizziness, nausea, abdominal pain, and somnolence.
Zolpidem	2.5–5 (6.25 extended release)	5 (6.25 extended release)	3	Increased risk of falls. Available in extended release, as a dissolvable tablet, and as an oral spray. Complex sleep-related behaviors reported. Evidence for next-day impairment of driving skills prompted FDA warning and lowering of recommended starting dose, especially in women.
Melatonin receptor agonists				
Ramelteon	8	8	2.6	Dizziness, myalgia, headache, other adverse events reported; no significant rebound insomnia or withdrawal with discontinuation.
Tasimelteon	20	20	1.3	Headache, increased ALT, nightmares and abnormal dreams, FDA approved selectively for non-24-hour sleep-wake disorder.
Orexin receptor antagonists				
Suvorexant	5	5–20	8–19	Next-day somnolence and impaired performance (eg, driving); cataplexy-like symptoms also reported. Contraindicated in patients with narcolepsy.
Lemborexant	5	5–10	17–19	Next-day somnolence and impaired performance (eg, driving); cataplexy-like symptoms also reported. Contraindicated in patients with narcolepsy.
Sedating antidepressants				
Doxepin	3	3–6	15.3 (doxepin); 31 (metabolite)	Somnolence/sedation, nausea, and upper respiratory tract infection reported; antagonizes central H_1-receptors (antihistamine); active metabolite; should not be taken within 3 hours of a meal.
Mirtazapine[OL]	7.5	7.5–30	31–39	Increased appetite, weight gain, headache, dizziness, daytime carryover; long half-life may limit use in some older adults; lower doses tend to be more sedating than higher doses.
Trazodone[OL]	25–50	25–100	6 ± 2; may be prolonged	Orthostatic effects, increased risk of falls, risk of priapism in men; limited evidence for use in insomnia.

Other considerations about Medications

- **Goal of pharmacologic therapy**

  - Improve ONSET of sleep
  - Improve "staying asleep"
  - Dose/selection is according to symptoms

  SAFER PRESCRIBING :
  - LOWEST effective dose
  - Intermittent use (2-4 x week)
  - Short term use (2-4 weeks; <90 days)
  - Taper to reduce side effects of stopping medication
    (Dose reduction by 50% x 2 weeks, may take up to 6 weeks to DC)

CASE

- 82 -year-old male resident of a Residential Care Home, with a medical history of diabetes, dementia, enlarged prostate, arthritis in left hip. He moved to a new residence from his daughter's home 1 month ago.
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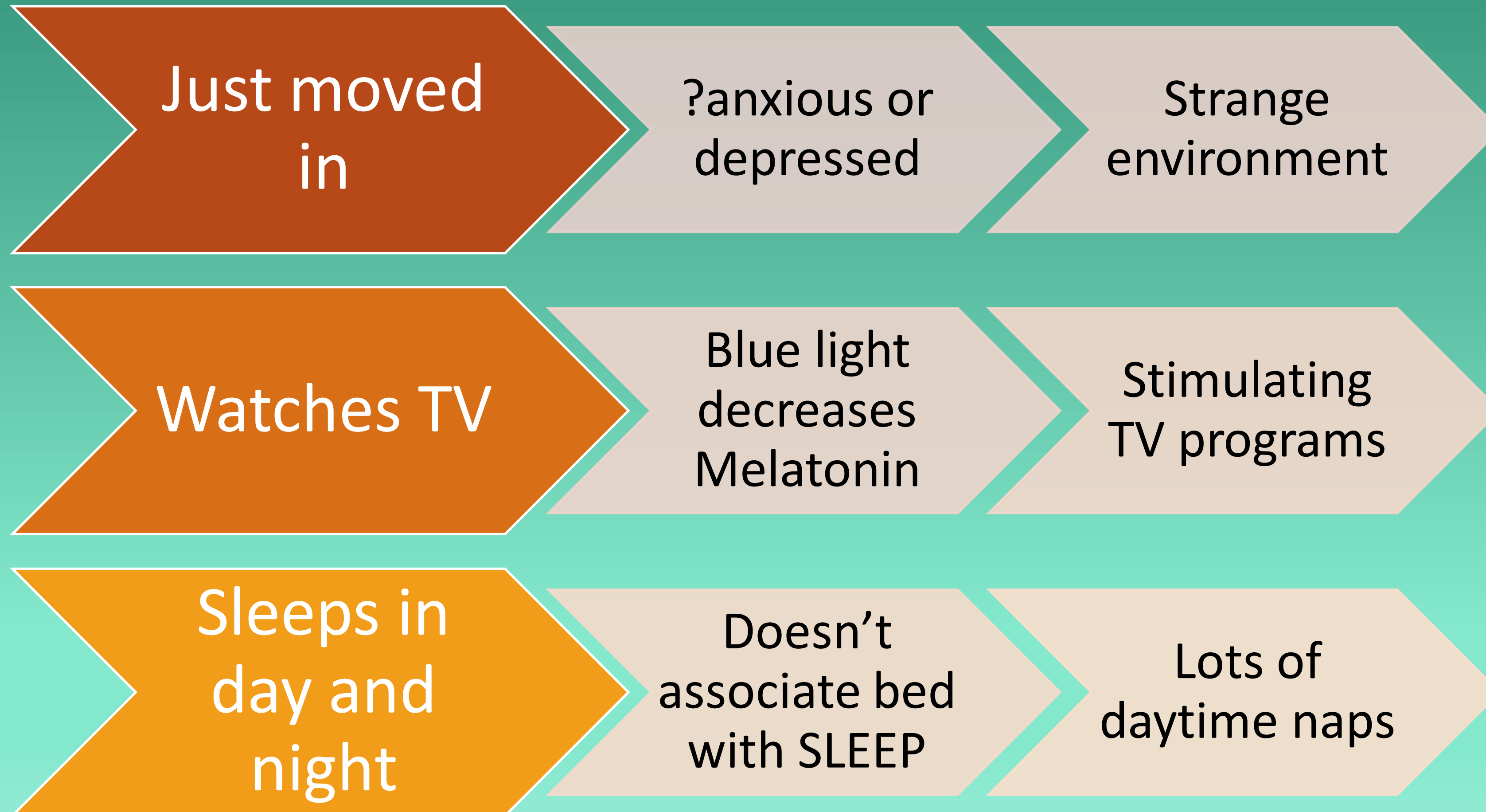
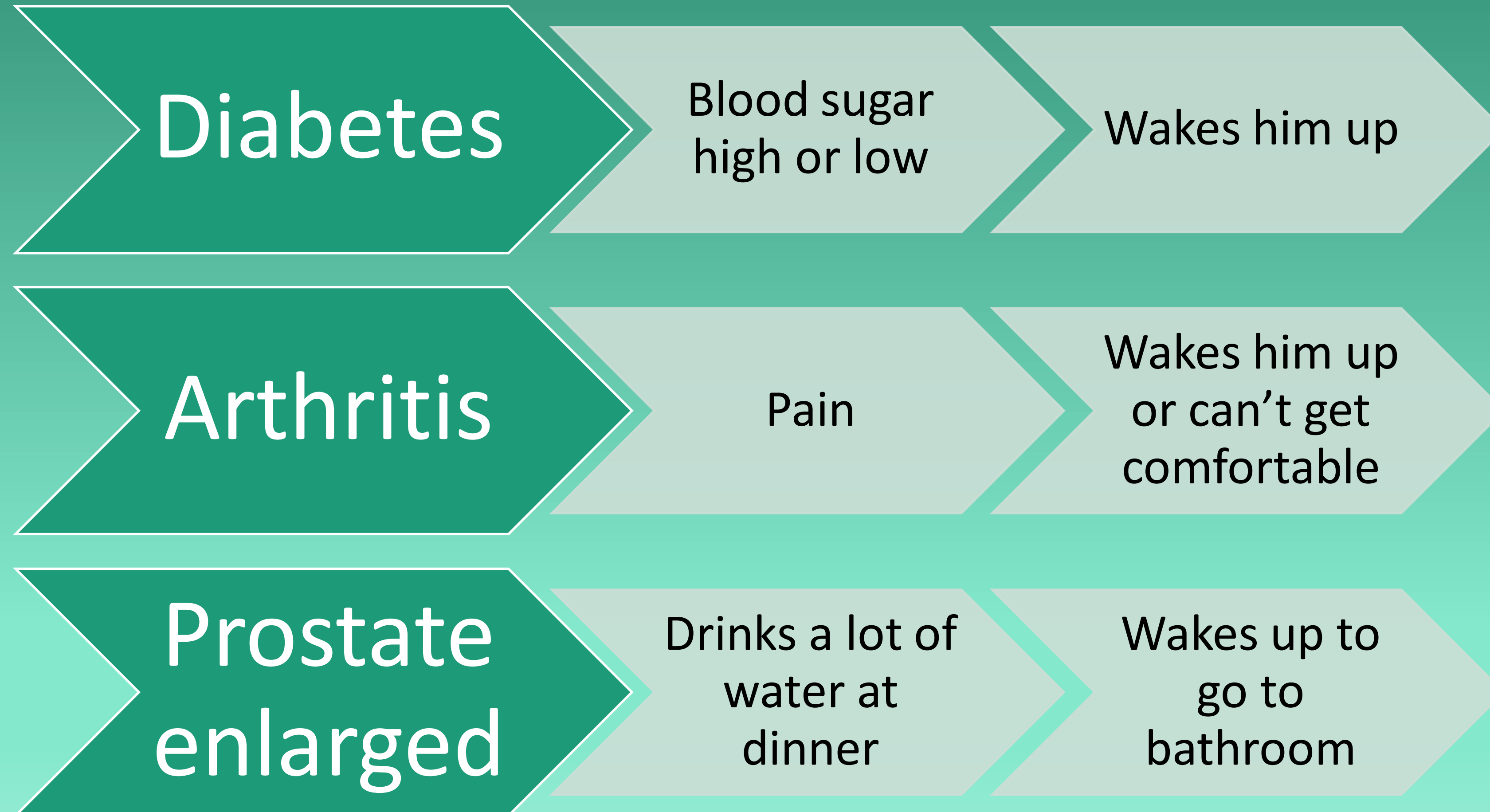
What could be causing his sleep problem?



Let’s look at his medical problems….



IN SUMMARY

#1 Ask about sleep, explore complaints

-Ask about the environment and psychologic issues

#2 Review medical problems that might cause sleep problems

#3 Look at medications /side effects

#4 Ask to keep a journal of patterns: Sleep /activities /meals/liquids

#5 Focused physical examination

#6 Review journal /observations of patient or caregiver

#7 EDUCATION on non pharmacologic methods

#8 Pharmacologic treatment CAREFUL consideration