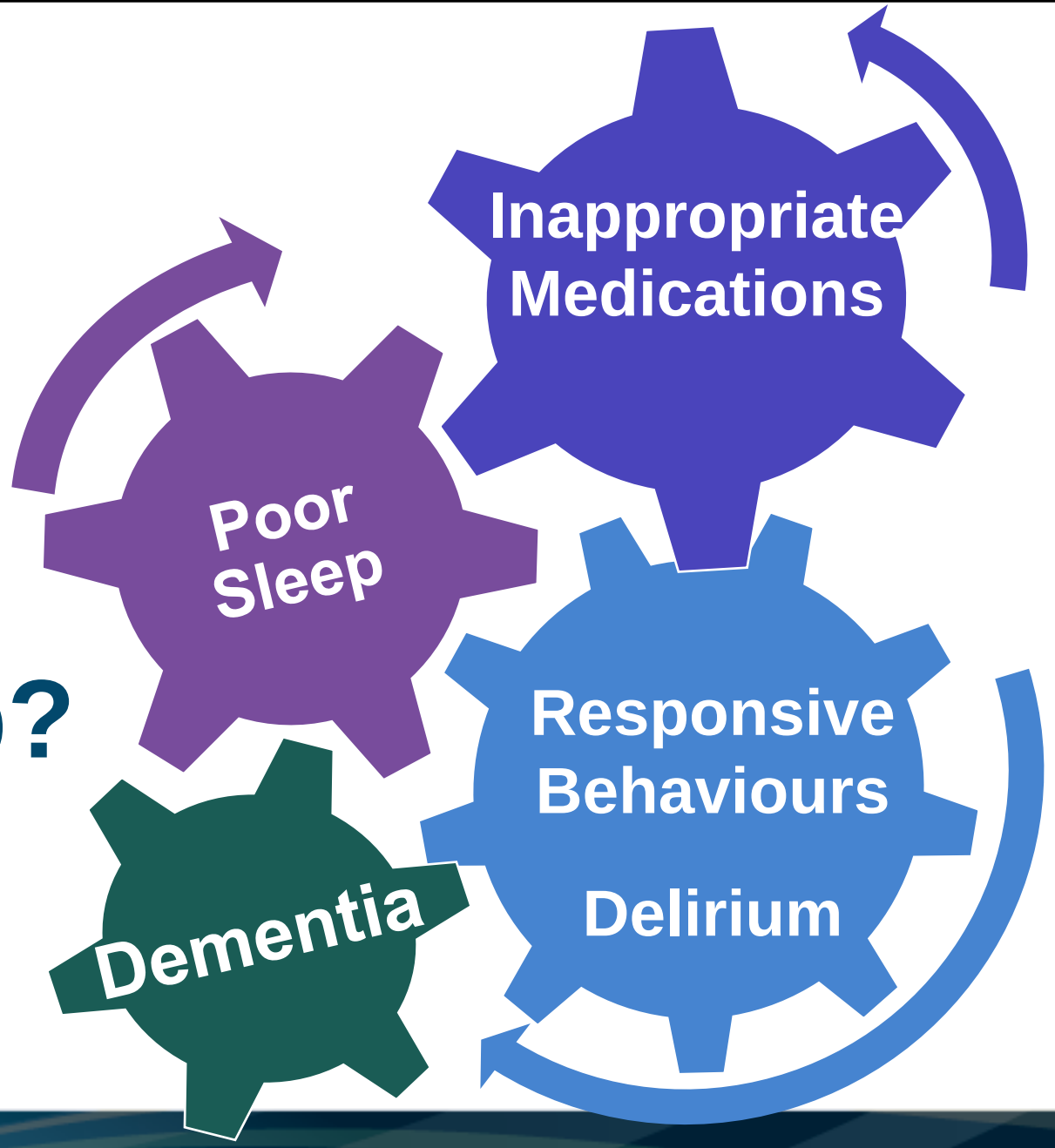
Alberta Health Services

Support of Sleep

Elder Friendly Care in Acute Care

Seniors Health Strategic Clinical Network

Why talk about sleep?



How do you feel when you haven't slept well?

Poor sleep can lead to:

- Irritability, aggression
- Depression, anxiety
- Confusion
- Falls
- Pain, medical problems

Stages of Sleep

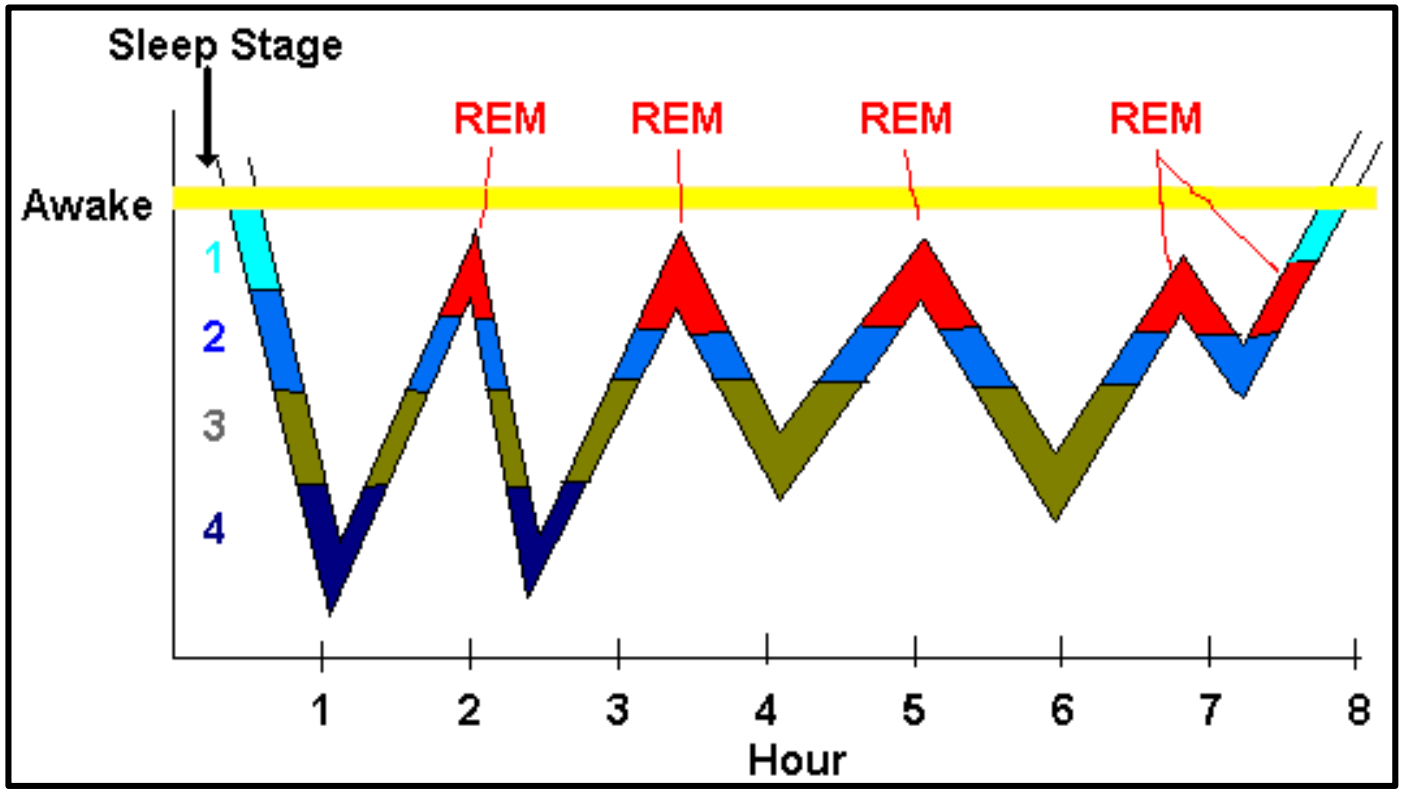
90 minute sleep cycles

REM sleep

⇨ memory, brain health

Stage 3 & 4

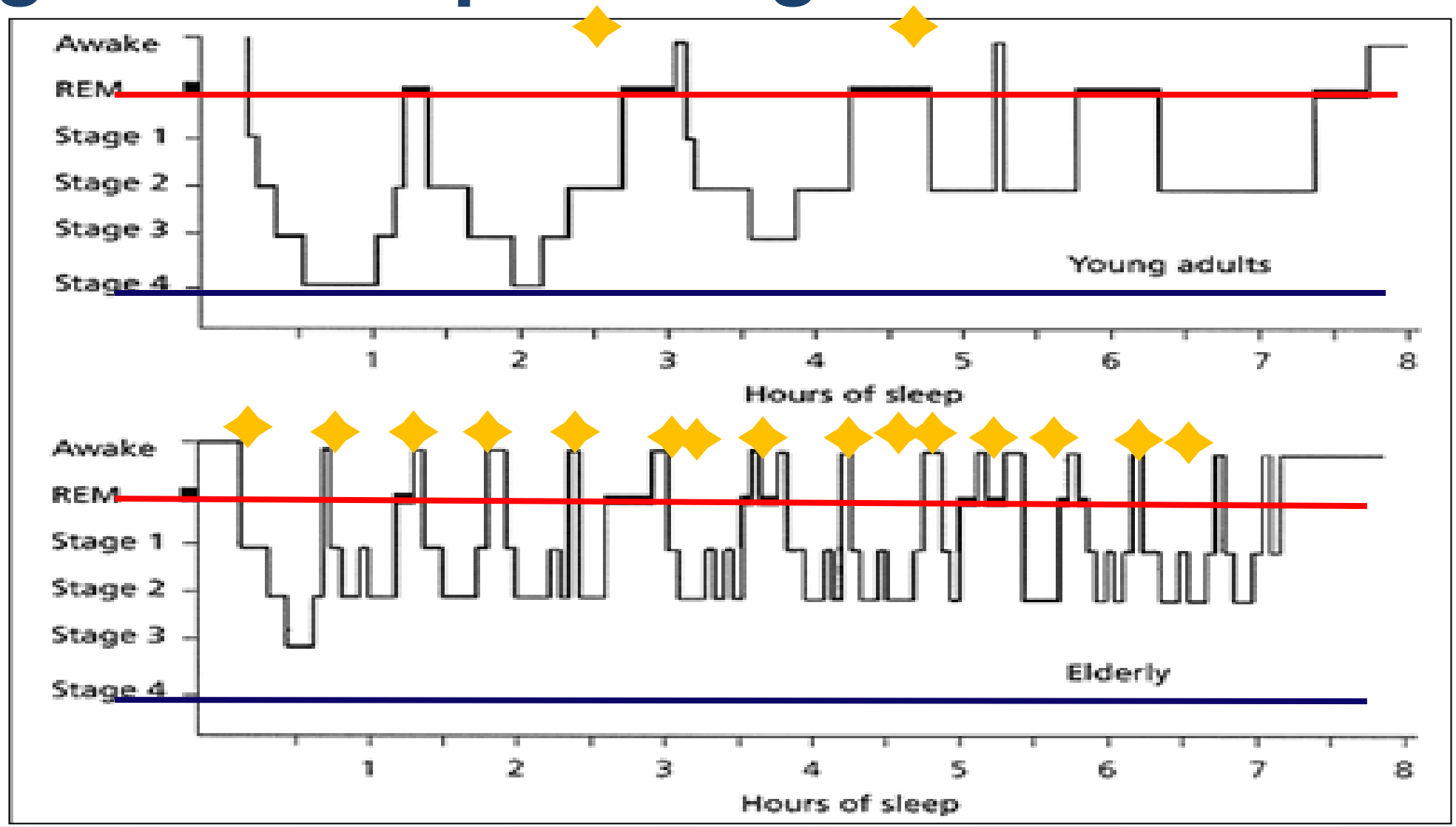
⇨ cell healing and repair



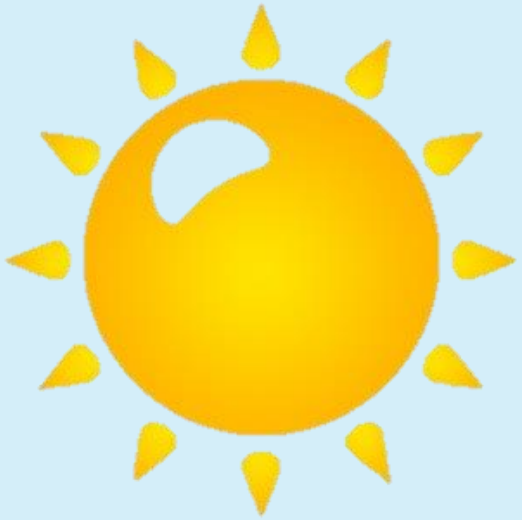
Sleep acts as the brain's "dishwasher", cleaning the brain so it is ready to return to optimal functioning when the person wakes up.

The Stages of Sleep ©University of Washington
Morley, Sleep and the Nursing Home, 2015

Stages of Sleep: Younger vs Older Adults



Healthy Sleep: Brain Chemistry and Mood



Day time

Increased Serotonin ⇨ calm and happy

Increased Cortisol ⇨ energetic & motivated
(too much cortisol = on edge)

Decreased melatonin ⇨ more awake

Night time

Increased Melatonin ⇨ relaxed and sleepy

Increased GABA ⇨ deep sleep and good dreams,
sense of well-being, relaxed muscles and nerves

Decreased serotonin & cortisol ⇨ better sleep

Regulation of Sleep and Circadian Rhythm

Light

2000 Lux for 1 hour (e.g. outside in sun), or 1000 Lux for 3 hours

Activity

Work and exercise

Temperature

Warmer during the day

Darkness

Less than 30-40 Lux

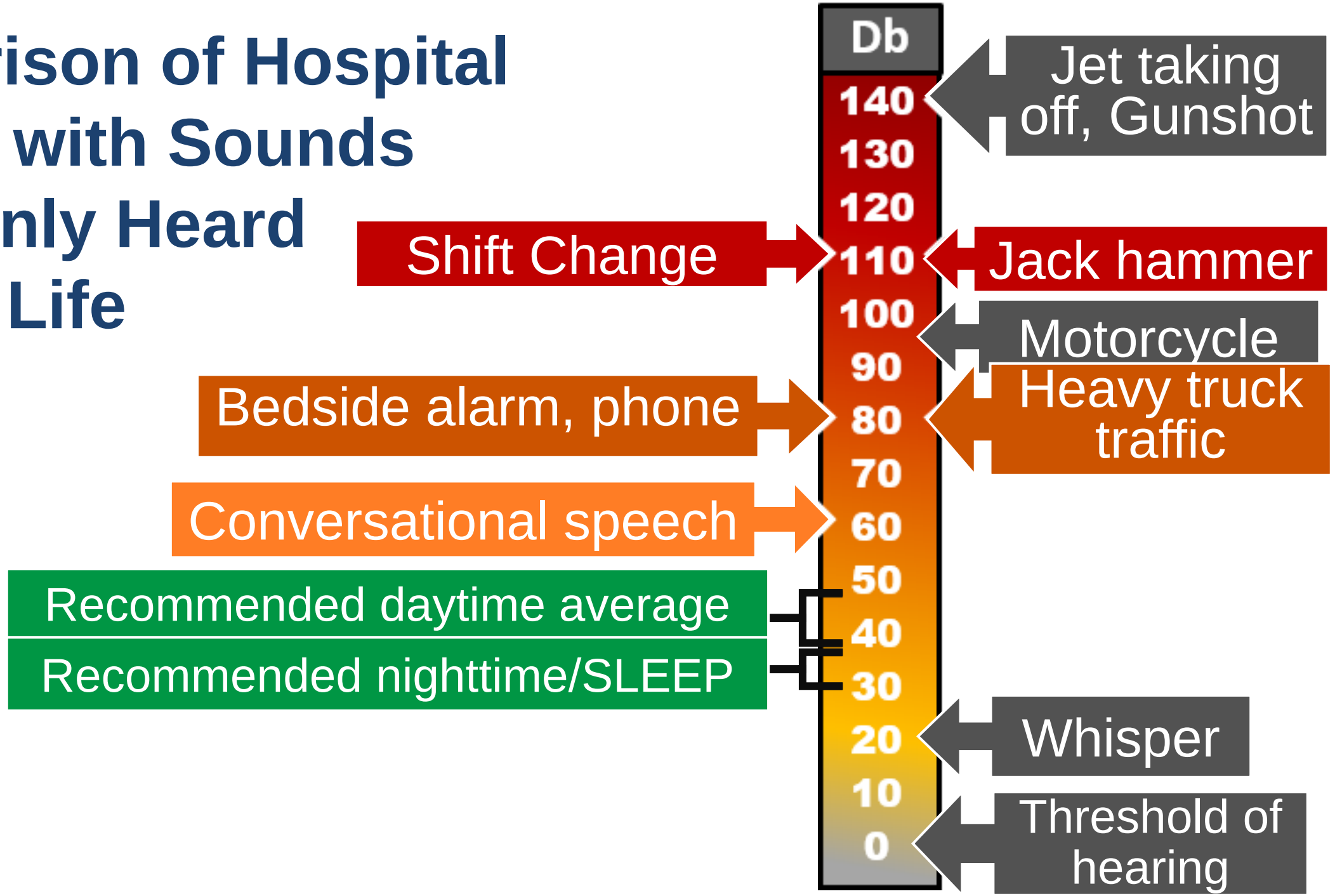
Quiet

< 35 Decibels (dB)

Temperature

Cooler at night. Body temperature drops slightly during sleep

Comparison of Hospital Sounds with Sounds Commonly Heard in Daily Life



What keeps patients awake at night?

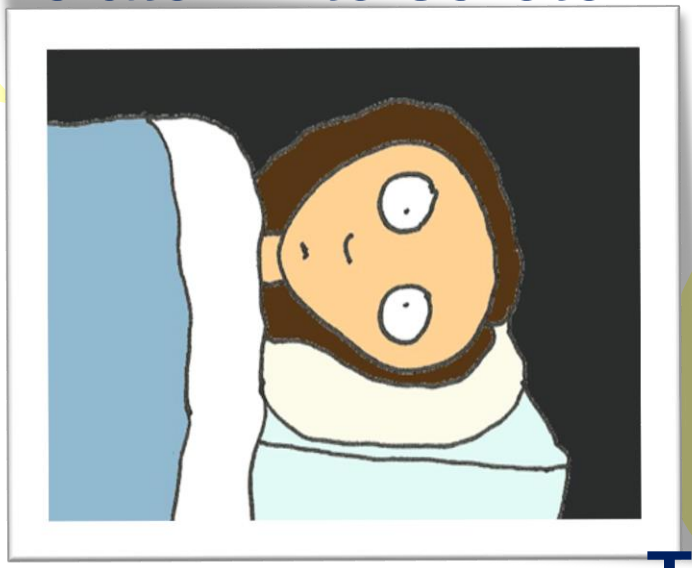
Day time

Inactivity: 83.5% of time sitting or lying flat, up to 17 hours a day in bed

Light too dim to convert melatonin to serotonin

Daytime **napping**

Early **bedtimes**



Night time

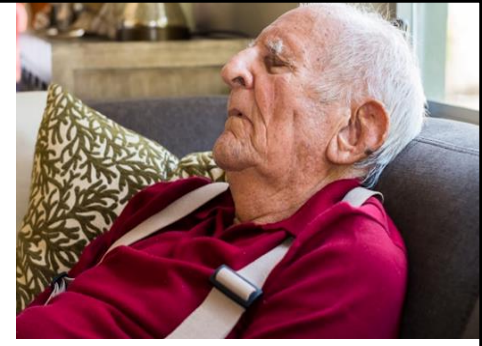
Light too bright

Temperature too warm/cold

Noise: 32 noises per night louder than 60 dB

Interruptions: 76% of all incontinence care resulted in awakenings

Sleep and Responsive Behaviours in a Nutshell



- The elderly sleep lightly; those with dementia sleep poorly
- Still only need ~ 8 hours sleep or less
- Good sleep: Day time light & activity, night time dark & quiet
- Poor sleep leads to responsive behaviours, aggression and increased use of antipsychotics & sleeping pills

Medications that May Affect Sleep

Acetylcholinesterase inhibitors (memantine)	INSOMNIA, DISTURBING DREAMS
Histamine H2 Blockers (Zantac, Tagamet)	Confusion, anxiety, hallucinations
Anticholinergics (hundreds of drugs)	Daytime sedation
Statins	Muscle Pain
Proton Pump Inhibitors (Losec)	Rebound acid reflux
Blood pressure (B-Blockers)	Altered sleep physiology, nightmares
Diuretics	Nocturia – avoid late in the day
Levodopa, carbidopa	Nightmares, insomnia
Antidepressants / SSRIs	Insomnia
Corticosteroids	rigmarole
Theophylline, decongestants	STIMULANT EFFECTS

Why do we call them “Sleeping Pills”?

Benzodiazepines:

- lorazepam (Ativan), temazepam (Restoril), zopiclone (Imovane)

Antipsychotics:

- quetiapine (Seroquel), olanzapine (Zyprexa)

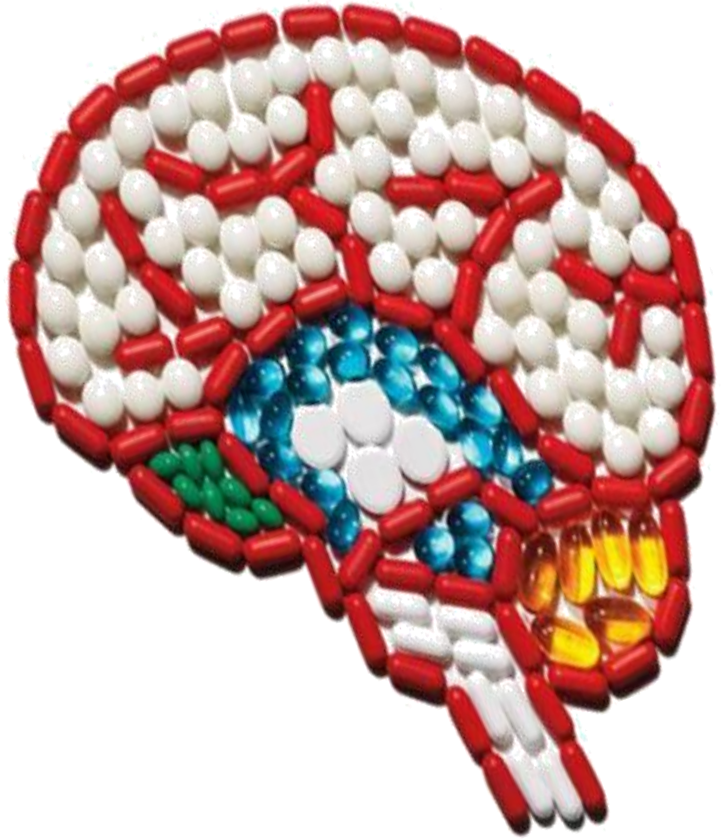
Antihistamines:

- diphenhydramine (Benadryl), dimenhydrate (Gravol), Tylenol Night, Sleep Eze, ZzzQUIL

Benzodiazepines and "Z-drugs"

Minor improvement in first 2-4 weeks:

- Fall asleep 10-20 min sooner, ~ 25 minutes more sleep
- Increase in stage 2 (light sleep), decreased REM and deep sleep



Side effects

- Confusion, memory loss, falls, delirium.
- Occasional use usually leads to constant use/dependence

Antipsychotics

No improvement

- total sleep time, time to fall asleep, day time alertness or sleep satisfaction

Side effects

- dizziness, restlessness, nervousness, restless leg syndrome, falls

"Widespread use of quetiapine as a sleep aid is occurring in the absence of evidence for effectiveness or safety." (Herper 2004)

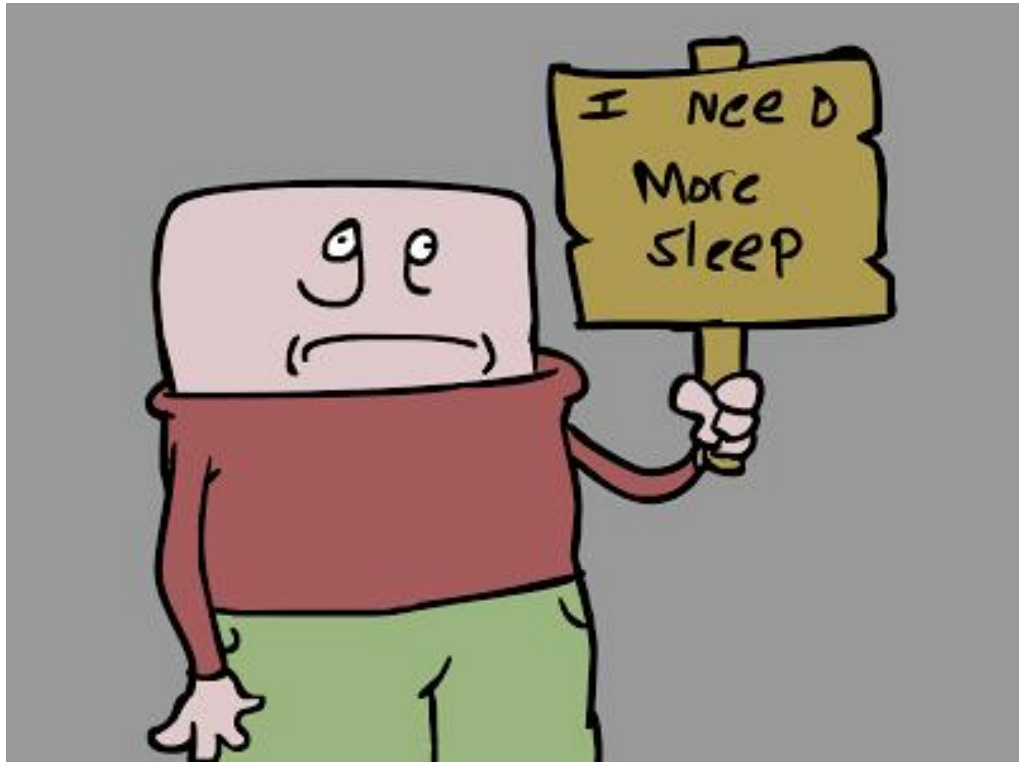
Antihistamines

No improvement
Tolerance develops quickly (no further benefit to sleep)

Side effects
Confusion, urine retention, delirium, constipation, restless leg syndrome, day time drowsiness (highly anticholinergic)

Shouldn't be taken by older adults but are widely used

Sleeping Pills: Not a Long Term Solution



Reminders:

- ✓avoid if possible
- ✓low doses for as short a period of time as possible
- ✓use with caution, monitor for side-effects
- ✓timing must be considered

Long term use of sleeping pills can result in a "*perpetual hangover*"

Melatonin Might Help

Variable results, not on formulary

At bedtime: may improve sleep, cognitive function and mood. May fall asleep faster, have increase in REM sleep

In late afternoon: may help with agitation, confusion, sundowning

- Combine with day time light & activity
- May not have an immediate effect (3 weeks)

Story #1 – OUTCOMES:

People slept more!!

HCAs available to respond to individual needs

Night staff job satisfaction - less busy work, more relaxed pace, more time for individualized and palliative care

Budget savings (less laundry, fewer incontinence products)

Story #2 – OUTCOMES:

43% reduction in physical aggression

42% reduction in verbal aggression

Older adults were:

- More rested in the morning
- More alert in the evening
- More tired/cooperative by bedtime
- More pleasant to visit with

Night

Reposition: those who can’t move on their own

Incontinence Care: avoid waking, use night products

Quiet safety rounds

Quiet staff & routines

Day

Bright light exposure

Activity and exercise

Evening

Dim lights

Reduced noise

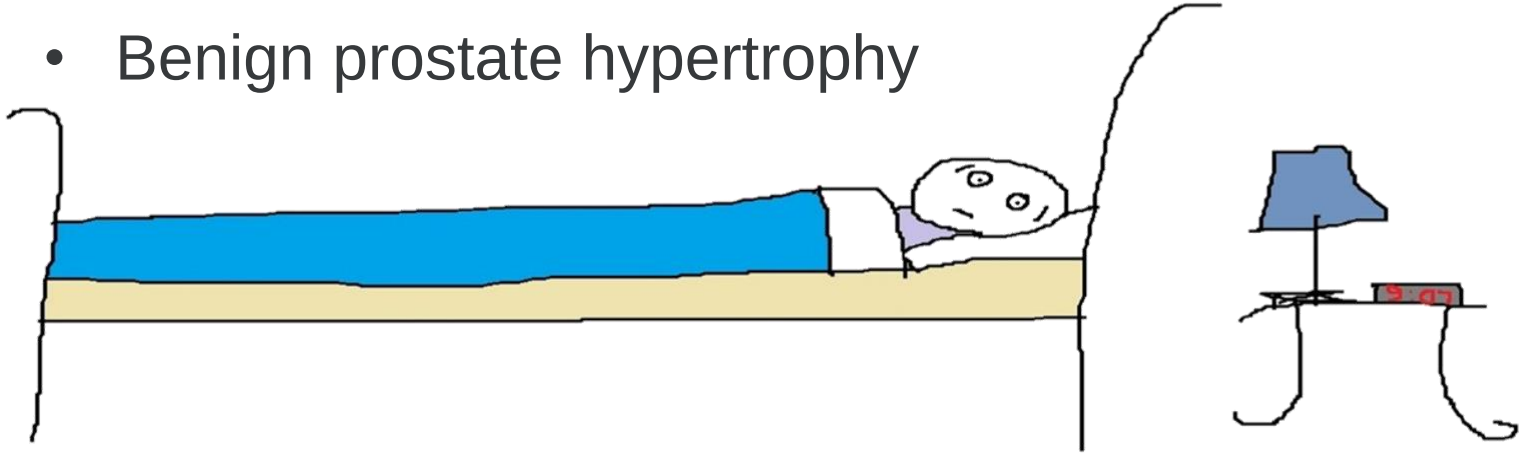
Calm evening activities

Bed time routines

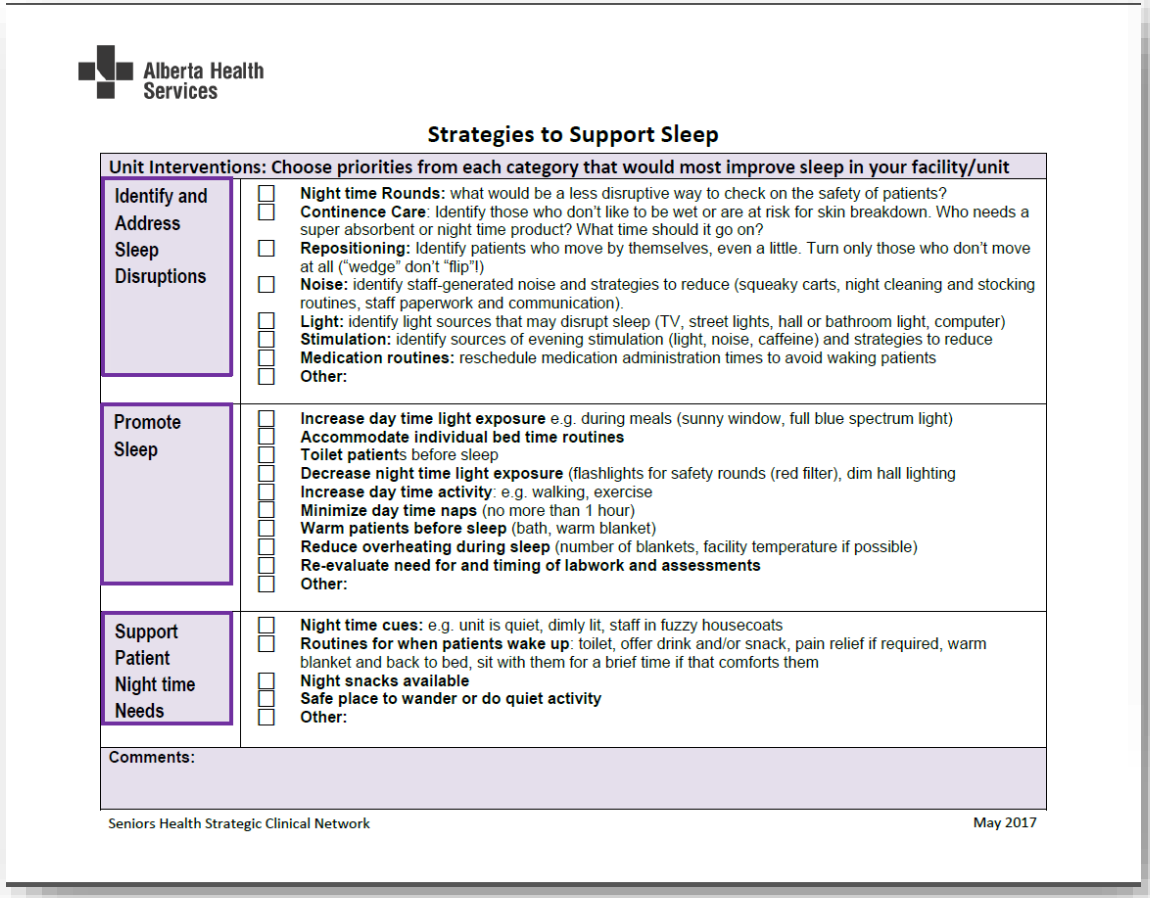
Many Things Can Disrupt Sleep

- Itchiness
- Nocturnal cough
- Acid reflux
- Hot flashes
- Nightmares
- Untreated pain
- Too hot or cold
- Caffeine in the evening
- Sleep apnea

- Unexpected noises: call bells, door snapping
- Confusing stimuli: flashing red light, reflections
- Uncomfortable bed
- Restless legs
- Congestive heart failure
- Benign prostate hypertrophy



Strategies to Support Sleep



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Strategies to Support Sleep

Unit Interventions: Choose priorities from each category that would most improve sleep in your facility/unit	
Identify and Address Sleep Disruptions	☐ **Night time Rounds:** what would be a less disruptive way to check on the safety of patients? ☐ **Continence Care**: Identify those who don't like to be wet or are at risk for skin breakdown. Who needs a super absorbent or night time product? What time should it go on? ☐ **Repositioning:** Identify patients who move by themselves, even a little. Turn only those who don't move at all ("wedge" don't "flip"!) ☐ **Noise:** identify staff-generated noise and strategies to reduce (squeaky carts, night cleaning and stocking routines, staff paperwork and communication). ☐ **Light:** identify light sources that may disrupt sleep (TV, street lights, hall or bathroom light, computer) ☐ **Stimulation:** identify sources of evening stimulation (light, noise, caffeine) and strategies to reduce ☐ **Medication routines:** reschedule medication administration times to avoid waking patients ☐ **Other:**
Promote Sleep	☐ **Increase day time light exposure** e.g. during meals (sunny window, full blue spectrum light) ☐ **Accommodate individual bed time routines** ☐ **Toilet patient**s before sleep ☐ **Decrease night time light exposure** (flashlights for safety rounds (red filter), dim hall lighting ☐ **Increase day time activity**: e.g. walking, exercise ☐ **Minimize day time naps** (no more than 1 hour) ☐ **Warm patients before sleep** (bath, warm blanket) ☐ **Reduce overheating during sleep** (number of blankets, facility temperature if possible) ☐ **Re-evaluate need for and timing of labwork and assessments** ☐ **Other:**
Support Patient Night time Needs	☐ **Night time cues:** e.g. unit is quiet, dimly lit, staff in fuzzy housecoats ☐ **Routines for when patients wake up**: toilet, offer drink and/or snack, pain relief if required, warm blanket and back to bed, sit with them for a brief time if that comforts them ☐ **Night snacks available** ☐ **Safe place to wander or do quiet activity** ☐ **Other:**
Comments:	

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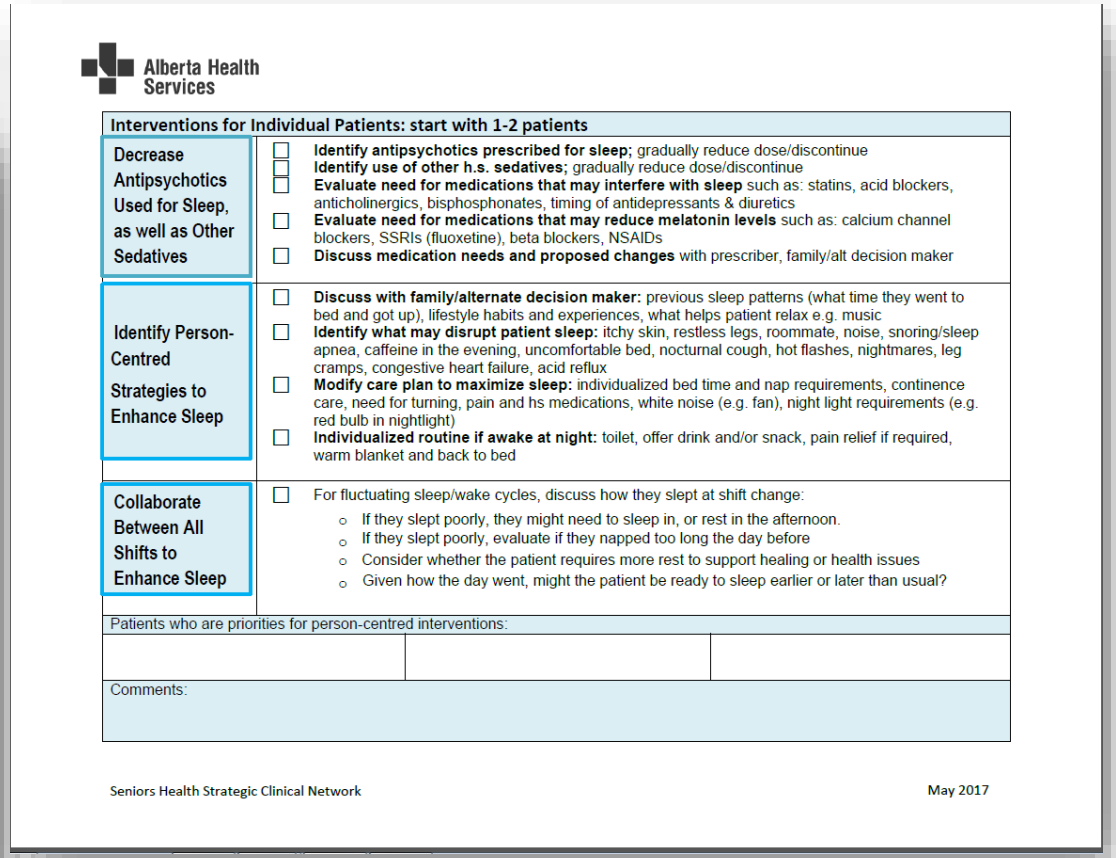

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Interventions for Individual Patients: start with 1-2 patients	
Decrease Antipsychotics Used for Sleep, as well as Other Sedatives	☐ **Identify antipsychotics prescribed for sleep;** gradually reduce dose/discontinue ☐ **Identify use of other h.s. sedatives;** gradually reduce dose/discontinue ☐ **Evaluate need for medications that may interfere with sleep** such as: statins, acid blockers, anticholinergics, bisphosphonates, timing of antidepressants & diuretics ☐ **Evaluate need for medications that may reduce melatonin levels** such as: calcium channel blockers, SSRIs (fluoxetine), beta blockers, NSAIDs ☐ **Discuss medication needs and proposed changes** with prescriber, family/alt decision maker
Identify Person-Centred Strategies to Enhance Sleep	☐ **Discuss with family/alternate decision maker:** previous sleep patterns (what time they went to bed and got up), lifestyle habits and experiences, what helps patient relax e.g. music ☐ **Identify what may disrupt patient sleep:** itchy skin, restless legs, roommate, noise, snoring/sleep apnea, caffeine in the evening, uncomfortable bed, nocturnal cough, hot flashes, nightmares, leg cramps, congestive heart failure, acid reflux ☐ **Modify care plan to maximize sleep:** individualized bed time and nap requirements, continence care, need for turning, pain and hs medications, white noise (e.g. fan), night light requirements (e.g. red bulb in nightlight) ☐ **Individualized routine if awake at night:** toilet, offer drink and/or snack, pain relief if required, warm blanket and back to bed
Collaborate Between All Shifts to Enhance Sleep	☐ For fluctuating sleep/wake cycles, discuss how they slept at shift change: ○ If they slept poorly, they might need to sleep in, or rest in the afternoon. ○ If they slept poorly, evaluate if they napped too long the day before ○ Consider whether the patient requires more rest to support healing or health issues ○ Given how the day went, might the patient be ready to sleep earlier or later than usual?
Patients who are priorities for person-centred interventions:	
Comments:	

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Ways to Improve YOUR Sleep

Awake

Bright light

Be active

Hydrate

Eat wide variety of whole foods

Transition

Relax

Avoid intense exercise

Easy listening music

Reduce light exposure

Asleep

Turn down heat

Block out light

Phone off

White noise