USF HEALTH

University of South Florida

GERIATRIC WORKFORCE ENHANCEMENT PROGRAM (GWEP)

Learn@Lunch

Geriatric Education Series

Kathryn Hyer, PhD, MPP
Principal Investigator

AHEC
Providers of Continuing Education

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS), under grant #U1QHP28739, ***USF Geriatric Workforce Enhancement Program*** for $ 2.24 M. This information or content and conclusions are those of the presenter and should not be construed as the official position or policy of, nor should any endorsements be inferred by, HRSA, HHS or the U.S. Government.

For additional information about this and other USF GWEP events, email amaynard@health.usf.edu

SLEEP IN OLDER PERSONS

BRUCE E ROBINSON MD, MPH

UNIVERSITY OF SOUTH FLORIDA GWEP CONSULTANT GERIATRICIAN

CLINICAL PROFESSOR OF GERIATRICS, FSU

OBJECTIVES:

- Understand the common age-related changes in sleep
- Discuss the evaluation of the older person with sleep complaints
- Identify sleep apnea, PLMS, RLS, and REM sleep disorders and their treatments
- List sleep hygiene techniques
- Understand the benefits and burdens of the various drugs used to improve sleep
- Prepare to counsel older persons regarding improving sleep

AGING CHANGES IN SLEEP

- Decreased efficiency with little change in sleep time
- Increased sleep latency
- Early to bed and early to rise
- Frequent awakenings
- Daytime naps
- More time in lighter sleep stages

Mrs. M is a 78 year old resident of a senior community who is being seen for hypertension, diabetes and osteoarthritis. Her medications are metformin, 1000 mg. each morning, lisinopril 5 mg. daily and HCTZ 25 mg. daily.

As you are finishing her visit and writing her prescriptions, she asks you for something to help her sleep.

What do you ask?

What do you do?

NATIONAL SLEEP FOUNDATION

Complete in Morning

Start date: //Day of week:	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
I went to bed last night at:	PM/AM	PM/AM	PM/AM	PM/AM	PM/AM	PM/AM	PM/AM
I got out of bed this morning at:	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM
Last night I fell asleep:							
Easily	☐	☐	☐	☐	☐	☐	☐
After some time	☐	☐	☐	☐	☐	☐	☐
With difficulty	☐	☐	☐	☐	☐	☐	☐
I woke up during the night:							
#of times							
#of minutes							
Last night I slept a total of:	Hours	Hours	Hours	Hours	Hours	Hours	Hours
My sleep was disturbed by: List mental or physical factors including noise, lights, pets, allergies, temperature, discomfort, stress, etc.							
When I woke up for the day, I felt:							
Refreshed	☐	☐	☐	☐	☐	☐	☐
Somewhat refreshed	☐	☐	☐	☐	☐	☐	☐
Fatigued	☐	☐	☐	☐	☐	☐	☐
Notes: Record any other factors that may affect your sleep (i.e. hours of work shift, or monthly cycle for women).							

Complete at the End of Day

Day of week:	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
I consumed caffeinated drinks in the: (M)orning, (A)fternoon, (E)vening, (N/A)							
M/A/E / NA							
How many?							
I exercised at least 20 minutes in the: (M)orning, (A)fternoon, (E)vening, (N/A)							
Medications I took today:							
Took a nap? (circle one)	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No	Yes / No
If Yes, for how long?							
During the day, how likely was I to doze off while performing daily activities: No chance, Slight chance, Moderate chance, High chance							
Throughout the day, my mood was... Very pleasant, Pleasant, Unpleasant, Very unpleasant							
Approximately 2-3 hours before going to bed, I consumed:							
Alcohol	☐	☐	☐	☐	☐	☐	☐
A heavy meal	☐	☐	☐	☐	☐	☐	☐
Caffeine	☐	☐	☐	☐	☐	☐	☐
Not applicable	☐	☐	☐	☐	☐	☐	☐
In the hour before going to sleep, my bedtime routine included: List activities including reading a book, using electronics, taking a bath, doing relaxation exercises, etc.							

Mrs. M returns with a sleep log, in which she reports no trouble initiating sleep, but 2-3 awakenings in the night to urinate, and difficulty falling back to sleep when she is awakened.

She generally will drink a shot of vodka in orange juice before retiring, to help her relax. She drinks coffee with breakfast, and sometimes after her nap in the afternoon “to help me get going”.

Her sleep log reports only once that she felt fatigued, on a Saturday evening when she went to bed late but got up at her usual time.

She does report that discomfort in her knees and shoulders is noticeable when she's trying to get back to sleep.

Her husband reports no awareness of restless sleep or snoring.

Labs from her last visit show a HbA1C of 8.3

HISTORY AND EXAM

- Ask patient to elaborate on sleep pattern:
  - Trouble falling asleep or staying asleep?
  - Daytime sleepiness?
  - Naps- when and how long?
- Partner information - restless legs, snoring, vivid dreams, awakenings
- Screen for depression and dementia
- Examine for sources of pain, nocturnal dyspnea

DEFINITION

Insomnia disorder is defined by the *DSM-5* as:

- Difficulty in initiating or maintaining sleep
- Waking up too early
- Associated with daytime impairment, such as:
  - Fatigue
  - Poor concentration
  - Daytime sleepiness
  - Concerns about sleep
- Symptoms must occur at least 3 times per week
- For chronic insomnia, symptoms must have been present for at least THREE (3) months

COMMON MEDICAL PROBLEMS CAUSING INSOMNIA

- Arthritis
- Lung disease
- Stroke
- Neurodegenerative disorders (dementia, Parkinson's disease)
- Paresthesias
- Cough
- Dyspnea from cardiac or pulmonary illness
- Gastroesophageal reflux
- Nighttime urination

DRUGS THAT DISTURB SLEEP

- Diuretics
- Sympathomimetics (caffeine, bronchodilators, etc.)
- Cholinesterase inhibitors
- Antidepressants
- Alcohol (rebound insomnia, diuresis)
- Chronic benzo use (light fragmented sleep)
- Rebound from nightly hypnotic use

SLEEP APNEA

- Central or obstructive
- Risk factors
  - Obesity, large neck, daytime sleepiness, snoring/interrupted breathing per partner, alcoholism, hypertension
- Associated with heart disease, mortality, cognitive impairment, MVA
- Diagnosis by polysomnography
  - Home versions available
- Treated with oral appliances/positive airway pressure

PERIODIC LEG MOVEMENTS DURING SLEEP (PLMS)

- Present in 1/3 older adults
- Usually not requiring treatment
- PLMD is a sleep disorder associated with PLMS not better explained by another primary problem on polysomnography

RESTLESS LEGS SYNDROME

- Characterized by an uncontrollable urge to move the legs, usually with an unpleasant sensation in the legs, that worsens with inactivity, generally at night, and improves with movement
  - Diagnosis is made based on the patient's description of the symptoms (polysomnography not required)
  - Symptoms occur while the person is awake
  - Symptoms can also involve the arms
  - Antiemetics, neuroleptics, antidepressants, anticholinergics can worsen
- Prevalence increases with age
- Treat with dopamine agonist (ropinirole, pramipexole) if QOL affected

CIRCADIAN RHYTHM SLEEP DISORDERS

e.g. shift work, jet lag

- Occurs in older people, esp. in dementia
- Advanced sleep phase - try bright light in early evening
- Delayed sleep phase - bright light in daytime, melatonin hs
- Irregular sleep phase - try behaviorally to structure sleep to more appropriate/ acceptable times

REM SLEEP BEHAVIOR DISORDER

- Excessive motor activities during sleep and a pathologic absence of the normal muscle atonia during REM sleep
- Presenting symptoms are usually vigorous sleep behaviors associated with vivid dreams — may result in injury to the patient or bed partner
- Meds: cholinesterase inhibitors, antidepressants
- Associated with neurodegenerative disorders, (eg, Parkinson's disease, Lewy body dementia)
- Polysomnography for diagnosis

SLEEP IN THE HOSPITAL

- Factors contributing to insomnia in the hospital:
  - Illness
  - Medications
  - Change from usual nighttime routines
  - Sleep-disruptive environment

- Meds: benzos, not anticholinergics. Watch half-life

- Nonpharmacologic interventions can help:
  - Daytime bright-light exposure
  - Change medication times to allow patients to sleep later in morning
  - Monitoring, medication timing often disruptive and modifiable
  - Behavioral interventions: back rub, warm drink, relaxation tape at night

Mrs. M is a 78 year old resident of a senior community who is being seen for hypertension, diabetes and osteoarthritis. Her medications are metformin, 1000 mg. each morning, lisinopril 5 mg. daily and HCTZ 25 mg. daily.

She returns with a sleep log, in which she reports no trouble initiating sleep, but 2-3 awakenings in the night to urinate, and difficulty falling back to sleep when she is awakened. She generally will drink a shot of vodka in orange juice before retiring, to help her relax. She drinks coffee with breakfast, and sometimes after her nap in the afternoon "to help me get going".

Her sleep log reports only once that she felt fatigued, on a Saturday evening when she went to bed late but got up at her usual time. She does report that discomfort in her knees and shoulders is noticeable when she's trying to get back to sleep. Labs from her last visit show a HbA1C of 8.3

MANAGEMENT OF SLEEP COMPLAINTS

- Do not start an older patient with persistent sleep complaints on a sedative-hypnotic agent without careful clinical assessment to identify the cause of the complaints
- If the history and physical exam do not suggest a serious underlying cause, mild symptoms may respond to simple sleep hygiene, concentrating on factors contributing to poor sleep
- Chronic insomnia generally does not respond to simple sleep hygiene, and requires another behavioral approach

WHAT TO DO FOR MRS. M?

- Improve nocturnal glycemic control
- Long acting acetaminophen hs
- Stop alcohol at bedtime
- Consider stopping diuretic
- Sleep hygiene

SLEEP HYGIENE (LOTS OF INFO ON GOOGLE)

- Maintain a regular wake and sleep pattern seven days a week.
- Spend an appropriate amount of time in bed, not too little or too excessive.
- Avoid napping during the day, as it can disturb the normal pattern of sleep and wakefulness.
- Avoid stimulants, such as caffeine, nicotine and alcohol close to bedtime. While alcohol is well known to speed the onset of sleep, it disrupts sleep in the second half as the body begins to metabolize the alcohol, causing arousal.

SLEEP HYGIENE (cont'd)

- Exercise can promote good sleep. Vigorous exercise should be taken in the morning or late afternoon. A relaxing exercise, like yoga, before bedtime can initiate a restful night's sleep.

- Food can be disruptive right before sleep. Stay away from large meals close to bedtime.

SLEEP HYGIENE (cont'd)

- Ensure adequate natural light. This is particularly important for older people who may not venture outside as frequently as children and adults. Light exposure helps to maintain a healthy sleep-wake cycle.

- Establish a regular, relaxing bedtime routine. Try to avoid emotionally upsetting conversations and activities before trying to go to sleep. Don't dwell on or bring problems up in bed. Learn to still your mind.

SLEEP HYGEINE (cont'd)

- Associate your bed with sleep. It's not good to use your bed to watch TV, listen to the radio or read.
- Make sure the environment is pleasant and relaxing. The bed should be comfortable and the room should not be too hot, too cold or too bright.

COGNITIVE-BEHAVIORAL THERAPY FOR INSOMNIA

- Combines sleep restriction, stimulus control, and cognitive therapy, with or without relaxation techniques. Sleep hygiene also often included.
- Provided by behavioral sleep medicine specialists (psychologists)
  - Also available in self-help materials, online, and using trained associated health personnel
- First-line treatment for chronic insomnia

DRUGS FOR SLEEP PROBLEMS

- ABIM choosing wisely: "Do not use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation, or delirium."
- Most sleep medications increase the risk of falls in older adults
- Short-acting agents are used for problems initiating sleep
  - More rebound and withdrawal syndromes after discontinuation
- Intermediate-acting agents are used for problems with sleep maintenance
  - More daytime carryover
- Sedating antipsychotics should not be used in routine management of insomnia in older adults

INSOMNIA DRUGS

Drug	Dose (comp)	Half life	Cost
Lorazepam	3	16	$
Temazepam	15	12	$
Triazolam	.25	5	$
Zolpidem	5	2	$
Eszopiclone	2	8	$
Ramelteon	8	2	$$$$
Doxepin (Silenor)	6	15	$$$$
Trazodone	50	5	$
Melatonin	2	1	$

REFERENCES/RESOURCES

- GERIATRICS REVIEW SYLLABUS, AMERICAN GERIATRICS SOCIETY, 2016
- SLEEPING PILLS FOR INSOMNIA. CHOOSING WISELY; JUNE 2015 HTTP://CONSUMERHEALTHCHOICES.ORG/WP-CONTENT/UPLOADS/2015/06/CHOOSINGWISELYSLEEPINGPILLSAASM-ER.PDF
- NATIONAL SLEEP FOUNDATION (SLEEP LOG)