Sleep and Aging

- How does sleep change as we age?
- Do we need less sleep as we get older?
- Can a person expect to experience more sleep problems or have a sleep disorder as they advance in age?
- As we age, how does sleep affect our overall health, medical conditions and general well being?
- What can we do to get good sleep?
Sleep is Essential to Our Overall Health and Well-Being

- Key to our health, performance, safety and quality of life
- As essential a component as good nutrition and exercise to optimal health
- Essential to our ability to perform both cognitive and physical tasks, engage fully in life and function in an effective, safe and productive way
Normal Sleep and Normal Aging: Our Internal Clock

- The biological clock resides in the brain
- It helps regulate when we feel sleepy and when we are alert
- It works in tandem with light and dark, and our body temperature and hormones
The Sleep Cycle in Adults

- Stages: Awake, REM
- Hours in Sleep: 0, 1, 2, 3, 4, 5, 6, 7, 8

Source: National Sleep Foundation
Normal Sleep and Normal Aging: Less Deep Sleep
Health and Environment Affect Our Sleep

With age, we become more sensitive to:

- Hormonal Changes
- Physiological Conditions
- Environmental Conditions
  - Light
  - Noise
  - Temperature
Normal Sleep and Normal Aging: Sleep Efficiency

Changes with age

Sleep Efficiency (% Time in Bed Sleeping) vs. Age

- Men
- Women
The ability to get continuous and consolidated sleep may become more difficult as we age.
## Sleep Problems/Disorders
Prevalent Among Older Persons

### SYMPTOMS OF SLEEP PROBLEMS BY AGE

<table>
<thead>
<tr>
<th>Symptoms: a few nights a week or more</th>
<th>55-64</th>
<th>65-74</th>
<th>75-84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insomnia</td>
<td>49%</td>
<td>46%</td>
<td>50%</td>
</tr>
<tr>
<td>Snoring</td>
<td>41%</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>Sleep Apnea</td>
<td>9%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Restless Legs Syndrome (RLS)</td>
<td>15%</td>
<td>17%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Insomnia

- A perception or complaint of inadequate or poor sleep
  - Difficulty falling asleep
  - Frequent awakenings
  - Waking too early and having difficulty falling back to sleep
  - Waking unrefreshed

- A highly prevalent condition affecting as many as 48% of older persons

- Next day consequences
Insomnia (continued)

Effective Treatment
- Healthy sleep habits
- Behavioral therapy
- Prescription hypnotic medications
- Other therapies
Snoring

- Partial blockage of airway causing abnormal breathing and sleep disruptions
- 90 million; 37 million experience on a regular basis
- Males
  - Those who are overweight and with large neck size most at risk
- Loud snoring can be a symptom of sleep apnea
Sleep Apnea

- Increases as we age: affecting 4% and 2% of middle-aged men and women and close to 27% and 19% of older men and women.
- Characterized by pauses or gaps in breathing due to an obstruction of the airway.
Sleep Apnea (continued)

- Signs and Symptoms
  - Loud, regular snoring
  - Large neck size
  - Obesity
- Associated with major medical conditions
- Most common treatment
  - CPAP
Restless Legs Syndrome/Periodic Limb Movement Disorder

- Neurological movement disorders
- Involuntary urge to move due to unpleasant feelings in the legs during sleep or rest
- Jerking of legs and arms during sleep
- Increases with age

Treatment
- Medications
- Healthy lifestyle
- Sleep hygiene
Medical Conditions Increase with Age

Medical Conditions increase with age and are often associated with sleep problems and disorders

- Hypertension and Heart Disease
- Heart Failure
- Stroke
- Menopause
- Cancer
- Gastrointestinal Disorders
Medical Conditions increase with age and are often associated with sleep problems and disorders

- Alzheimer’s, Parkinson’s and cognitive problems
- Depression
- Arthritis
- Other conditions
Medications Can Also Cause Sleep Problems
The Use of Alcohol, Caffeine and Nicotine Impacts on Sleep
Establish a regular schedule with consistent bed and wake times

Maintain a relaxing bedtime routine

Create a sleep-promoting environment that is comfortable, quiet, dark and preferably cool
Sleep Tips (continued)

- Limit fluids and don’t eat too much close to bedtime
- Avoid caffeine, nicotine and alcohol too close to bedtime and even after lunch
- Exercise, but not within 3 hours before bedtime
If You Have Difficulty Sleeping

- Limit time in bed
- Use your bed only for sleep and satisfying sex
- Avoid watching the clock
- Limit naps
Keep a Sleep Diary to Identify Your Sleep Habits and Patterns

### National Sleep Foundation Sleep Diary

**Complete At End of Day**

- I went to bed last night at:
- I got out of bed this morning at:
- Last night I fell asleep to:
- When I woke up during the night:
- Last night I slept a total of:
- My sleep was disturbed by:
- I consumed:
- I exercised:
- I took medication(s):
- About 1 hour before going to sleep, I did:

<table>
<thead>
<tr>
<th>Complete at End of Day</th>
<th>Complete in Morning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>Morning</td>
</tr>
<tr>
<td>Afternoon</td>
<td>Afternoon</td>
</tr>
<tr>
<td>Within several hours</td>
<td>Within several hours</td>
</tr>
<tr>
<td>Before going to bed</td>
<td>Before going to bed</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Alcohol</td>
</tr>
<tr>
<td>A Heavy meal</td>
<td>A Heavy meal</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Weekly Summary**

- Day 1: Date, _______________
- Day 2: Date, _______________
- Day 3: Date, _______________
- Day 4: Date, _______________
Seek Help From a Sleep Specialist and a Sleep Study
Summary: Sleep Changes

- Sleep during the night changes with increasing age:
  - Less deep sleep and more lighter sleep
  - More difficulty maintaining sleep due to arousals and awakenings
  - Sleep is less efficient and more fragmented
- The internal biological clock shifts to earlier bed and wake times
- Older persons experience a higher prevalence of medical conditions and take more medications that interrupt sleep and are associated with sleep problems/disorders
- Older persons experience a higher prevalence of sleep disorders
Summary: Consequences of Sleep Changes

- Tendency to stay in bed longer to get a sufficient amount of sleep results in worse sleep.
- More likely to take more naps to meet sleep need—may result in worse sleep.
- Inadequate or poor sleep results in daytime sleepiness and fatigue.
- Ability to function well, enjoy life and overall quality of life is affected.
Summary: What you can do

- Learn about sleep
  - Understand how your sleep changes and observe your habits and experiences
- Apply healthy sleep practices to your sleep style so that you get sufficient quality sleep
- Talk to your doctor about your sleep and see a sleep specialist if you experience chronic difficulty sleeping and/or have symptoms of sleep disorders
The National Sleep Foundation is an independent nonprofit organization dedicated to improving public health and safety by achieving public understanding of sleep and sleep disorders, and by supporting public education, sleep-related research and advocacy.
Articles:

- Floyd JA, Medler SM, Ager JW, and Janisse JJ. Age-related changes in initiation and maintenance of sleep: a meta-analysis. *Research in Nursing and Health* (2000); 23(2): 106-117
- Gentili A and Edinger JD. Sleep disorders in older people. *Aging* (Milano, 1999); 11(3): 137-141
- Morin CM, Colecchi C, Stone J, Sood R, and Brink D. Behavioral and Pharmacological Therapies for Late-Life Insomnia: A Randomized Controlled Trial. *JAMA* (1999); 281: 991-999
Articles:

- Vitiello, MV. Effective Treatment of Sleep Disturbances in Older Adults. *Clinical Cornerstone* (2000); 2(5): 6-27
Books:
- Ancoli-Israel, Sonia. *All I want is a Good Night’s Sleep*. St. Louis: Mosby-Year Book, Inc, 1996

Other:
- National Sleep Foundation
  - 2003 Sleep in America poll
  - Leadership Congress on Sleep, Health and Aging Monograph, 2004
  - Sleep and Aging (Public Education Brochure), 1998
- NIH Consensus Development Conference
  - The Treatment of Sleep Disorders of Older People (Volume 8, Number 3), 1990

For more information, visit the National Sleep Foundation’s website at

[www.sleepfoundation.org](http://www.sleepfoundation.org)