



Catching Some ZZZs...
Why Sleep Matters.




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How did YOU sleep last night?

Centers for Disease Control has declared sleep deprivation to be a national epidemic!



After this session...



- Explain the science of sleep
- Identify contributing factors to sleep deprivation in elders
- List evidenced based interventions to enhance the quality of sleep

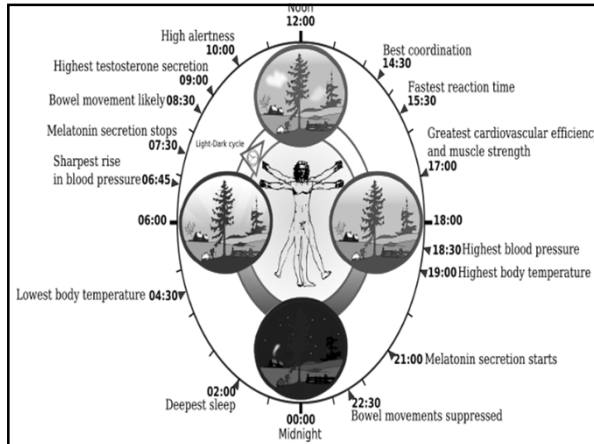
How Did We Get Here?

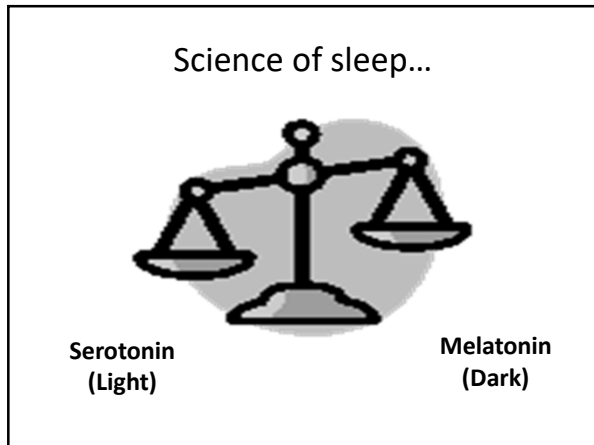
- Consortium of 5 Minnesota long term care providers
- PIPP grant from the MN Dept. of Human Services (3 year)
- Success determined based on the QIs:
 - Pain
 - Antipsychotic use
 - Behaviors



- Increased light exposure during day
- Decreased light exposure at night
- Reduced napping
- Reduced nighttime disruptions
- Delayed bed time
- Less time spent in bed
- Increased natural wake up
- Improved sleep efficiency
- Eliminated ALARMS!







Sleep Architecture

- Composed of 3 segments
 - Light sleep (stage 1 and 2)
 - Deep sleep (stage 3 and 4)
 - REM (Rapid eye movement)
 - **Essential to get four hours of uninterrupted sleep**
 - **Sleep problems in the elderly are not a normal part of aging**

(Kamel & Gammack, 2006)

Stage 4 Sleep (pre-REM)



- Physical healing occurs during this stage:
 - Identified as the most restful stage
 - Increased growth hormone secretion and decreased metabolism levels
 - Higher arousal threshold
 - Accounts for 13-23% of total sleep time
 - Muscles and organs are regenerated

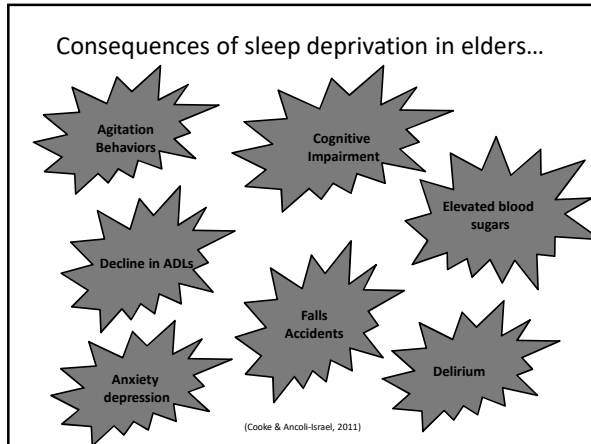


Rapid eye movement (REM) sleep

- Accounts for 20–25% of total sleep time in most human adults.
- Respirations become very rapid, irregular and shallow. The heart rate increases and the blood pressure rises.
- REM sleep includes rapid eye movements as well as a very rapid brain wave activity similar to being awake.
- Associated with healing the emotional and psychological health of the body. Episodic dreams and long stories, relieve stress, process emotions, detox our feelings of: fear, anger, happy and sad.
- Cements memories.
- Muscular paralysis occurs to protect organisms from self-damage.


Evidence-based Approaches

- Eight hours sleep during the night
- Four hours uninterrupted
- Reduce light exposure during night
- Increase light exposure during am and afternoon
- Limit napping
- Eliminate alarms



The Pain Problem in long term care...

- 45-80% prevalence of chronic pain.
- Majority experience **daily pain**.
- 30% received **NO** pain medication.
- Results in muscle tension, fatigue, changes in appetite or sleep, depression, anxiety, or fear of re-injury.
- Increased when sleep deprivation is present.
- Sleep deprivation increases stress/anxiety levels
- Residents with dementia cannot report pain.



(Annals of Long Term Care, 2013)

Non-Pharmacologic Management

- Lifestyle management:
 - Improve sleep
 - Eat a balanced diet
 - Drink plenty of fluids
 - Encourage daily physical activity
 - Range of motion
- Relaxation techniques – spiritual care, hand massage, laughter, yoga (example)
- Cold packs/warm blankets
- Physical therapy



Interventions for Pain

- Medicate for pain AND quality sleep.
- *Use **PAINAD Scale** for dementia residents.
- Start with non-opioid such as acetaminophen, NSAIDS OTC or Rx.
- Consider long acting pain medication.
- *Schedule routine pain meds.*
- Maintain therapeutic level – same med consistently given.
- PRNs are for breakthrough pain!
- Use *visual pain scale* consistent with MDS for asking about pain
- *Educate nurses regarding pain management!*



* PAINAD Scale can be found at
<http://www.geriatricpain.org/Content/Assessment/Impaired/Pages/PAIDADTool.aspx>



Quiet on the Hall!

- There is **no evidence** to suggest that alarms reduce falls.
- There **is** evidence to suggest that alarms - increase pain, anxiety, depression and result in serious declines.
- "Restraints in nursing homes were associated with continued, and increased, occurrence of serious fall-related injuries." (Tinetti, 1992)
- Massachusetts nursing homes reduce falls by 32% as the result of alarm elimination program (Godar, 2016)
- Alarm reduction begins with education of staff and assessment of resident.

Napping Disturbs Nighttime Sleep



More than one 30 - 40 minute nap, robs nighttime sleep;
 primarily at Stage 3 and REM Stages of sleep!
 Limit daytime napping...

Turning & Repositioning Study

- *Turning for Ulcer Reduction: A Multisite Randomized Clinical Trial in Nursing Homes*
- **Goal:** Determine optimal repositioning frequency of NH residents at risk for pressure ulcers
- **Participants:** 942 age 65 older, Braden score of moderate to high.
- **Conclusion:** There was no difference in pressure ulcer incidence over 3 weeks of observation between those turned 2,3, 4 hour intervals in this population using high density mattresses.

(Bergstrom, 2013)

Reduce nighttime interruptions...

- Use high density mattresses.
- Extend turning and repositioning.
- Update policy/procedure.
- Care plan weekly skin checks!
- Use nighttime briefs
- Teach staff to reposition with minimal disruption.
- Gentle reduction of fluids after evening meal.
- Educate staff, resident and family.
- Time meds and toileting to normal sleep/wake cycle.

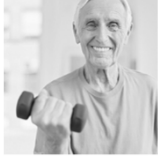


Interventions to light exposure...

- Open room shades/blinds in the morning.
- Close in the evening.
- Increase sunlight exposure in early am and late afternoon
- Serve meals in rooms with lots of natural light.
- Do activities in rooms or outside in natural light.
- Encourage families to take loved ones for walks or sit in rooms with natural light.
- Artificial lights may be used with MD order.



Increase physical activity...



- Incorporate physical movement into every activity.
- Encourage walk to dine/park and dine programs
- Encourage families to do physical activities with loved one
- Med pass – reach out and take it
- Travel around the world, tap dance club, wall art, dance break, etc.

Medications and Sleep



- Side effects
- Sleeping pills
- Diuresis effect
- Ineffective
- Timing
- Other

Diet....




- Limit alcohol and caffeine after lunch.
- Incorporate snooze foods into PM snacks i.e. bananas, almonds, dairy, cherries, and proteins
- Limit foods that irritate stomach at evening meal.
- Gentle control of fluids after dinner.



<http://health.usnews.com/health-news/articles/2012/07/19/sleep-promoting-and-sleep-stealing-foods>

Where to start?




“How did you sleep last night?”

Where to start?

- Start with elders at high risk:
 - Falls
 - Pain
 - Delirium/increased confusion
 - “Behaviors”
 - Quality Measures
 - Residents with alarms



The MDS and Sleep



- Quality Measures
 - Worsening behavior
 - Depressive symptoms
 - Urinary tract infections
 - Falls
 - Unexplained weight loss
 - Pain
 - Pressure sores
 - Antipsychotics
 - Decline in ADLs
