Sleepless In Atlanta

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FSAP ... finding solutions to life’s challenges.
Objectives

• Review biological processes of sleep.

• Identify common causes of insomnia.

• Learn traditional and technology-based strategies for addressing stress-related problems with sleep onset and maintenance.
Sleep Related Domains

- Mood (< 6 hrs increases depression risk)
- Weight (Ghrelin and Leptin Changes)
- Memory (stages 3-4 & sleep spindles)
- Pain/Headaches
- Energy/Fatigue
- Restorative Health
- Reproductive Health (hormones and libido)
- Work Productivity

(Colten & Altevogt, 2006)
Stage 1 - This is the stage between sleep and awake. Relaxed alpha rhythms disappear. There are slow rolling eye movements, the eyes may open and close intermittently, and the individual often maintains awareness without knowing that they are asleep. This is also the stage during which pseudo insomnia often becomes a problem. (30 sec – 7 mins)

All stages - (Colten & Altevogt, 2006)
In this stage, theta activity is observed and sleepers become gradually harder to awaken; the theta waves are interrupted by abrupt activity called sleep spindles (electric waves) and K-complexes (in responses to sensory stimuli). This is unequivocal sleep.
Stage 3-4

These used to be separate stages, but have been combined in recent years. It is characterized by increases in EEG voltage changing to domination by delta waves. This final stage rapidly declines with age. There is progressive difficulty in arousal. Occurs within 30-45 minutes and may last from a few minutes to an hour. Often followed by brief stage 2 before REM.
REM (Rapid Eye Movement)

Usually 75-90 minutes after onset and lasts 5-10 minutes, less intense early. Final REM lasts 20-60 minutes. Includes jerky eye movements, phasic muscle twitches, and low muscle tone. Dreams occur here.

Babies have 80% REM. By age 60, Stages 3-4 have decreased to nothing while REM remains the same.
Disorders/Parasomnias

- Primary/Secondary Insomnia
- Sleep Rhythm Disorders
- Apneas and other breathing problems
- Hypnic Jerks, RLS, PLMD, Bruxism, and other movements (myoclonus)
- Sleep Walking
- Nightmares/Night Terrors
- Pain, Paralysis, Headache, Seizure, Wetting, Painful NPT, & other uncommon.
Common Problems

• Sleep Environment
  – Location
    • Bed, Recliner, Sofa, etc.
  – Noise
    • Partner, baby, traffic, pets, etc.
  – Comfort, Time/shift work

• Medical Conditions
  – Apnea, RLS, PLMD, pain, infection, head injury, etc.

(National Sleep Foundation)
• Stress (including anxiety and depression)
  – Personal, Work, Physical, etc.
    • Onset versus Maintenance

• Substances/medications
  – Alcohol and other drugs, medication side effects.
    • Rebound Effects

• Habit/Routine
  – Shift work, travel, social, etc.
Traditional Approaches

- Sleep Hygiene
- Prescription Medication
- OTC Medication
- Sound Screens

- Non-Traditional Approaches may include massage, acupuncture, herbal remedies, etc.
Behavioral Approaches

• Onset
  – Sensory Stimuli
  – Emersion

• Maintenance
  – Distraction
    • Sound Masking
    • Sound Engagement

(Waters, 1996)
• Heat to Head
  – Improves and lengthens Stage 3, even in older adults.
  – May reduce memory acquisition.

• Heat to “Stress Zone”
  – Same as above, but decreases time till reduction in alpha rhythms.
Sleep Onset Strategies

• Consider milk or chamomile tea
• Apply heat
• Hygiene routine
• Bedtime
• Book or Picture for 10 minutes only
• Lights off
• Sensory focus until sleep
Sensory Emersion

- Colors
- Textures
- Sounds
- Temperature
- Smells

- Nature is usually best.
Sleep Maintenance

- Provide sound masking screen first
- Puppy Principle
- Add in cyclic distraction
- Sensory focus
Distraction Sounds

- Cyclic
  - The sound comes, stays a while, changes, goes away.
- Variable
  - Must include change
- Avoid high pitch
- Avoid cadences, voices, rhythms
- Avoid intrusive sounds
Sound Options

• CD’s
• Tapes
• Technology
  – Apps (white noise lite)

• Again, Nature is usually best.
Waking Intrusions

Don’t
- Get Up
- Turn On Lights
- Eat/Drink
- Look at Clock
- Panic
- Engage
- Check to see if you are asleep

Do
- Return to Imagery
- Use sleepy breathing
- Focus on cyclic sound
- Immerse in sensory focus
- Assume you will fall back asleep
- Let it happen
Absolute No-No’s

• Napping (but if you must, then no more than 20 minutes).

• Caffeine after noon.

• Food or drinks within 3 hours of bed time (except milk or chamomile tea).
Questions
Useful Links

• Sleep Hygiene
  – http://sleepfoundation.org/ask-the-expert/sleep-hygiene
  – http://www.psychologytoday.com/blog/prefrontal-nudity/201112/fix-your-sleep-hygiene

• Natural Remedies
  – http://www.health.com/health/gallery/0,,20306715,00.html

• Sleep Clinics
  – http://www.emoryhealthcare.org/sleep/
Want to learn more? For more information, individual assessment, or individualized sleep planning, please contact FSAP.

(404) 727-4328

Sweet Dreams!
PDF is available free from the National Academies Press at: http://www.nap.edu/catalog/11617.html
