

Sleep Study

- Sleep studies help doctors diagnose sleep disorders such as sleep apnea (a serious sleep disorder in which breathing repeatedly stops and starts), periodic limb movement disorder, narcolepsy, restless legs syndrome, insomnia, and nighttime behaviors like sleepwalking and REM sleep behavior disorder.
- Often these disorders cannot be identified with a normal office visit—your doctor needs to gather more conclusive evidence while you're asleep.
- National Sleep Foundation (2019)

Sleep Study Cont.

- A sleep study is a non-invasive, overnight exam that allows doctors to monitor you while you sleep to see what's happening in your brain and body.
- For this test, you will go to a sleep lab that is set up for overnight stays—usually in a hospital or sleep center. While you sleep, an EEG monitors your sleep stages and the cycles of REM and nonREM or NREM sleep you go through during the night, to identify possible disruptions in the pattern of your sleep.
- A sleep study will also measure things such as eye movements, oxygen levels in your blood (through a sensor—there are no needles involved), heart and breathing rates, snoring, and body movements.
- National Sleep Foundation (2019)

A

Sensor at nose to measure air flow

Sensors on face and scalp measure eye movement and brain activity

Elastic belt sensors around chest and belly measure amount of effort to breathe

Sensor on finger measures amount of oxygen in blood

Wires transmit data to a computer. A technician in a nearby room monitors the data.

B Polysomnogram record (over time)

Blood oxygen level: Decrease in blood oxygen level after an event

Breathing event: Height = length of event

REM sleep stage: Top levels = wake/REM sleep; Bottom levels = deep sleep



OTC Medications

- OTC Sleep Aids:
 - Excedrin PM
 - Nytol
 - Nyquil
 - Tylenol PM
 - All contain Diphenhydramine which is intended to cause mild drowsiness
- Side effects:
 - Difficulty urinating
 - Confusion or delirium
 - Morning drowsiness



Prescription Medications

- Prescription Sleep Aids:
 - Ambien (zolpidem tartrate)
 - Ambien CR (zolpidem tartrate extended release)
 - Lunesta (eszopiclone)
 - Sonata (zaleplon)
 - All contain Gamma-aminobutyric acid (GABA) which work on the GABA receptors in the brain for relaxation



Older Medications

- Other and older sleep aids:
 - Ativan (lorazepam)
 - Halcion (triazolam)
 - Restoril (temazepam)
 - Valium (diazepam)
 - Xanax (alprazolam)
 - All contain Benzodiazepines which causes sedation in the GABA brain receptors
- Side effects:
 - Memory disturbances
 - Behavior changes prior to sleep
 - Hallucinations

Antidepressants as Sleep Aids

- o Tricyclic Antidepressants as Sleep Aids:
 - o Adapin (doxepin)
 - o Aventyl (nortriptyline)
 - o Elavil (amitriptyline)
 - o Pamelor (nortriptyline)
 - o Sinequan (doxepin)
 - o Trazodone (desyrel)
- o Side effects:
 - o Blurry vision, dry mouth, difficulty urinating, and dizziness

Natural Supplement?

- o Melatonin
 - o Melatonin is the hormone that helps plants and animals maintain their normal daytime-nighttime, wake-sleep cycles of life.
 - o In humans and other mammals, most of the body's supply of melatonin is produced and secreted by tiny pineal gland.
 - o The body makes its melatonin using the amino acid tryptophan as the main ingredient.
 - o Melatonin is produced at night in humans.
 - o Exposure to light slows its production and release.

CBT-I

- o Cognitive behavioral therapy for insomnia (CBT-I) is the most popular non-medication approach to treating insomnia.
- o CBT-I is more effective than medication in treating insomnia over the long term while medication may provide stronger short-term results.
- o CBT-I has also shown to be more effective than mindfulness-based stress reduction (MBSR) in terms of the length of the treatment and maintenance of the results..
- o (Garland et al., 2014).



CBT-I

- Approaches used by CBT-I include stimulus control to teach the association between the bed and sleeping, sleep restriction to restore sleep regulation, and cognitive restructuring to address anxiety-related thoughts that lead to a lack of sleep.
- (Mitchell, 2012)



Unhealthy Coping

- Drugs and/or alcohol to aid in sleep
 - Is it bad if it works?
 - Do the ends justify the means?
 - What if no other medication works?
- Discussion regarding “switching one drug for another.”
 - Tucson example



Ways to Increase your Quality of Sleep

- Anyone experience any success in increasing his/her quality of sleep?
- Sleep Hygiene
 - Review assessment
