

# Committee on Accreditation for Polysomnographic Technologist Education

CoA PSG [www.coapsg.org](http://www.coapsg.org)

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# History

- Became a CAAHEP member in 2003
- First CAAHEP programs accredited 07/2006
- Currently 2 Sponsors:
  - American Association of Sleep Technologists (AAST)
  - Board of Registered Polysomnographic Technologists (BRPT)

# Our Progression

- OJT – no formal education
- Certificate/Diploma – with possible higher transitioning
- Associate Degree
- Bachelor Degree
- Currently have 42 programs/with a couple Initials

# The Future

- A growing need for sleep technologists and field advancement:
  - Educators
  - Researchers
  - DME providers
  - Lab Managers

# Challenges

- Need RPSGT credentialed/degreed professionals
- Attrition rate and the increasing need for professional sleep technologists
- Higher education via accreditation/transition
- Significant state regulatory laws

# Polysomnography

- What is it?

The allied health specialty involving the process of attended and unattended monitoring, analysis, and recording of physiological data during sleep and wakefulness to assist in the assessment of sleep and wake disorders and other sleep disorders, syndromes, and dysfunctions that are sleep-related, manifest during sleep, or disrupt normal sleep and wake cycles and activities.

# What do we do?

- Monitor physiological parameters – very inclusive test process
- Time spent – approximately 10 hrs-3 days – direct patient to tech ratio

## What can be determined?

- Sleep disorders: Over 100 identified
- Sleep apnea – most publicized/common 1 in 3

# Why do we need this test

- Our lives are a mess! – Always on the go
- Our pillars of health:
  - Nutrition
  - Exercise
  - SLEEEEEEEPPPP!!!!!!!!!!!!!!!!!!!!

# Humans – Really? – Why?

- Only species – CHOOSES NOT to sleep
  - #1 reason: We are TOO BUSY – Right?
  - Everything else gets our time, except our bodies
  - OR, we have a sleep disorder which may include
    - Inability to sleep too little or too much
    - Intrinsic body issues: such as Neurological diseases(since sleep occurs in the brain)
    - Injuries/pain/comorbid diseases/medications/ shift work/kids/technological advances – hum.....This is a biggee

# Sleep Disorder(s) anyone?

- **OKAY** -----

Who in this room has a sleep disorder?

# A very extensive field

I'm going to jump ahead to some very common issues of importance for today

# Sleep Apnea

- Chronic/Serious Disease
- 1 in 3 – take a look around you
- Do you experience any of these problems?
  - Unintentionally falling asleep during the day
  - General day time sleepiness
  - Unrefreshing sleep
  - Fatigue
  - Insomnia
- Do you ever wake from sleep with a choking sound or gasping for breath?
- Has your bed partner noticed that you snore loudly or stop breathing while asleep?

## (continued)

- Other questions that may indicate a high risk for apnea:
  - Nodding off while driving
  - Often wake up with a headache
  - Have a neck size of 17 inches or more
  - Have a body mass index (BMI) of 25 or higher
  - Have high blood pressure
  - Have a family member who has sleep apnea
- The Epworth Sleepiness Scale is used to help determine the likelihood of sleep apnea

# Sleep Apnea/Risks

- Independently associated with an increased risk of stroke, cancer, and death
- Moderate to severe sleep apnea makes you 4 times more likely to die when the sleep disorder is left untreated in the long term
- See a physician if you have any of these symptoms
- Treatment: Continuous Positive Airway Pressure (CPAP); or variations

# INSOMNIA --- YIKES!!

- Aside from sleep apnea, this is the most common sleep complaint (30-35% of adults)
- Symptoms:
  - Difficulty falling asleep
  - Difficulty maintaining sleep
  - Waking up too early in the morning

# (continued)

- Insomnia involves both a sleep disturbance and daytime symptoms.
- Negatively affects:
  - Work performance
  - Impairs decision making
  - Damage relationships
- Destroys quality of life

## (continued)

- Everyone has insomnia from time to time.
- Two types of insomnia
  - Short-term: Lasts up to 3 months(jet lag – the constant traveler – crossing time zones)
  - Chronic: 3 times/week/minimum of 3 months

# Insomnia – Symptoms

- Symptoms:
  - Fatigue
  - Cognitive
  - Poor performance
  - Moodiness/Irritability
  - Daytime Sleepiness
  - Impulsiveness/aggression
  - Lack of energy/motivation
  - Errors or accidents
  - Mounting frustration over not sleeping

# Insomnia - Causes

- Insomnia most often associated with another problem such as:
  - Stress
  - Other sleep disorders
  - Medical conditions (pain/lack of mobility/pregnancy/menopause/Parkinson's)
  - Mental Disorders (depression is the most common/anxiety/bipolar disorders)
  - Medication or Substance Abuse (OTC – cold meds/allergy/antidepressants/blood pressure meds/caffeine/nicotine/)
  - Environmental Factors (noise/light/extreme temperatures/chemicals/bed partners – including the pets)
  - Habits and lifestyle (constant irregular sleep schedule)

# Insomnia – Diagnosis

- Longer than 30 minutes to fall asleep/wake up during the night
- Daytime symptoms: sleepy and tired
- Time in bed: Do you get at least 7 hours of sleep?!?!?
- Safe and good environment to sleep well

## **Self-Test**

- Keep a Sleep Diary

# Insomnia – Treatment

- Good sleep Hygiene
- Cognitive Behavioral Therapy (stress reduction/relaxation/schedule)
- Medications: Adjustment of medications

# Drowsy Driving – Impaired Driving

- Drowsy driving is a form of impaired driving that negatively affects a person to drive safely. Most people associate impaired driving with alcohol or drugs, but in this situation, **SLEEPINESS** is the primary cause.

# Educators/Students/Employers

- Our schools/institutions need to incorporate sleep education
- Students are suffering in many ways:
  - Sleep disorders
  - Underlying health conditions
  - Suffering in academics/severe drop in cognitive learning
  - Unbelievable lifestyle schedules:
    - Academics – advanced placement courses/heavy curriculums
    - Extracurricular activities – sports/social life/friends
    - Technology – too much stimulation/not enough rest

# What can we do – as parents?

- As parents

- Be aware – not tired – they are seriously sleep deprived
- Set limits
- Set established bedtime hours
- Follow good Sleep Hygiene

# As Educators?

- Encourage later and more desirable start and finish times for schools/colleges/classes
- Be flexible
- Allow sleep !! **ESPECIALLY** if this student is coming or leaving class via a vehicle

# As Employers

- Companies that allow sleep: Google, Nike, Zappos, Ben and Jerry's, NASA, Huffington Post
- Encourage sleep pods/nap rooms/etc.

# Advocate, advocate, advocate

- Raise the awareness to everyone
- Sleep is a pillar of health!

# Sleep Fun Facts

- Only ½ of a dolphin's brain goes to sleep at a time
- Lack of sleep can cause weight gain of 2 lbs. in under a week
- You burn more calories sleeping, than you do watching TV
- Before alarm clocks there were “knocker-ups” that came by with a stick to tap on your window to wake you
- A snail can sleep for 3 years
- Giraffes need 5-30 minutes of sleep in 24 hour period
- It's impossible to sneeze while sleeping
- Morphine derives its name from Morpheus, the god of sleep

# And my favorite fact!

- Sea otters hold hands when they sleep so they don't drift away from each other

# Additional References on Polysomnography

- <http://www.nhtsa.gov/Driving+Safety/Drowsy+Driving/ci.Research+on+Drowsy+Driving.print>  
National Highway Traffic Safety Administration – this is a great article !
- <https://med.stanford.edu/news/all-news/2015/10/among-teens-sleep-deprivation-an-epidemic.html> - A MUST READ about teens and sleep
- [http://www.narcolepsynetwork.org/wp-content/uploads/2010/05/ESS\\_Form-052210.pdf](http://www.narcolepsynetwork.org/wp-content/uploads/2010/05/ESS_Form-052210.pdf) – Sleepiness scale
- <http://yoursleep.aasmnet.org/pdf/sleepdiary.pdf> – Sleep Diary – should be completed in advance of seeing a sleep physician
- <http://www.lmep.com/Portals/9/KBase/Patient%20Ed/Sleep%20Problems-Disorders/Pediatric%20Daytime%20Sleepiness%20Scale.pdf> - Pediatric Daytime Sleepiness Scale
- <http://www.sleepforscience.org/resources/news.php> – This provides you with articles by Dr. Mary Carskadan – she is really good!
- <http://www.sleepeducation.org/essentials-in-sleep/shift-work> - Interesting read, great for anyone that works shifts or irregular hours (health care, safety personnel, manufacturing, etc.)