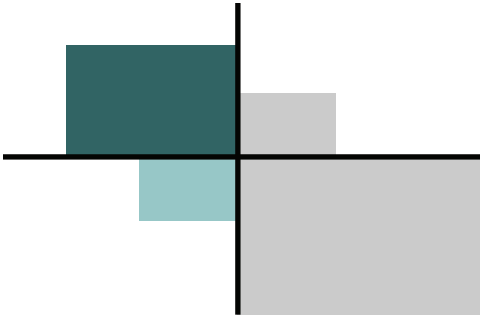


## What is Sleep Apnea?

Sleep apnea, or sleep-disordered breathing, is a condition in which breathing is briefly interrupted or even stops episodically during sleep. Because repeated arousal or even full awakening when breathing stops disturbs sleep, individuals suffering from sleep apnea are often drowsy during the day. Complications from an insufficient amount of oxygen reaching the brain are serious and even potentially life threatening.



---

# WHAT CAN I EXPECT AT MY SLEEP STUDY?



## Night 1

## WHY ALL THE WIRES?

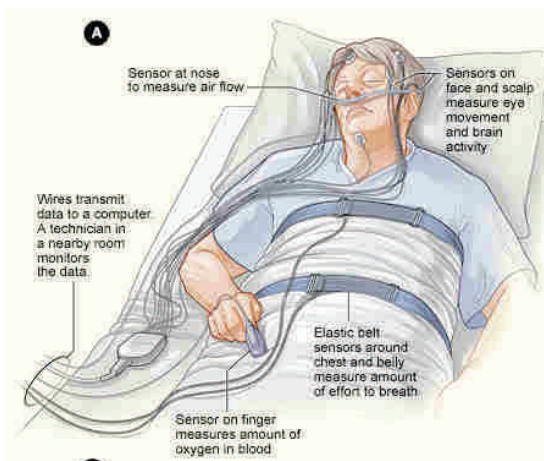
## Night 2

### The Polysomnogram (PSG)

A Sleep Study or Polysomnogram (PSG) is a multiple-component test, which electronically transmits and records specific physical activities while you sleep. The recordings become data, which will be "read" or analyzed by a qualified physician to determine whether or not you have a sleep disorder.

OR

**Split Night PSG with CPAP Titration** - Split Night PSG is conducted when moderate or severe Sleep Apnea has been discovered or strongly suspected during the first part of the nights study. The second half of the night is used for CPAP Titration.



The **EEG or electroencephalogram**, is a major part of a sleep study. It measures and records four forms of brain wave activity - alpha, beta, delta and theta waves. Alpha waves are usually found during relaxed wakefulness, particularly when your eyes are closed. Theta waves are seen during the lighter sleep stages 1 and 2, while delta waves occur chiefly in deep sleep, the so-called "slow wave sleep" found in sleep stages 3 and 4.

The **EMG or electromyogram**, records muscle activity such as face twitches, teeth grinding, and leg movements. It also helps in determining the presence of REM stage sleep. The amount and duration of these activities provides the doctor important information about your sleep.

The **EOG or electro-oculogram**, records eye movements. These movements are important in determining the different sleep stages, particularly REM stage sleep. The electrodes are usually placed on the outer aspect of your right eyebrow and along the outer aspect below or beneath your left eye.

**EKG or electrocardiogram**, records heart activities, such as rate and rhythm. Electrodes are placed on your chest.

**Nasal Airflow Sensor**: Records breath temperature, airflow, apnea and hypopnea events. A sensor is placed near your nose and mouth.

**Chest/Abdomen Belts**: Records breathing depth, apnea and hypopnea events. Elastic belts are placed around your chest and abdomen.

**Oximeter**: Records blood oxygen saturation. A Band-Aid like clip is placed on a finger.

**Video**: Records body positioning and movements.

**Snore Microphone**: Records snoring. An electrode is placed over your trachea, on your lower neck.

Although being hooked up may look uncomfortable and sleeping through the night seems impossible, most patients fall asleep with little difficulty.

A **CPAP Titration** is required if sleep apnea is diagnosed or strongly suspected. Typically, this is a full night of study performed during a second night, but is sometimes performed during the last few hours of a split-night study.

**CPAP (Continuous Positive Airway Pressure)** therapy is the first line of treatment for sleep apnea. The CPAP device delivers pressurized air through tubing to a mask or nasal pillows, which are fitted around the head. The pressurized air acts as an airway splint. It gently opens the patient's throat and breathing passages, allowing them to breathe normally while asleep.

During a titration study, the patient will sleep all wired up, just like a normal sleep study, but they will also wear a mask which is connected to a CPAP machine. Since the pressurized air can be irritating, many sleep labs also connect the CPAP device to a heated humidifier during the titration procedure. This adds moisture to the air after it leaves the CPAP machine and before it enters the patient's airway, easing the drying effect of the pressurized air.