



PHELPS COUNTY REGIONAL MEDICAL CENTER Polysomnogram (PSG/Sleep Study)

Neurodiagnostics/Sleep Lab telephone: (573) 458-7650

What is a sleep study?

Formally referred to as a Polysomnogram, a sleep study is a diagnostic test that looks for abnormal sleep patterns related to breathing disorders as well as parasomnias, like sleep walking and nocturnal seizures. Electrodes and other recording devices are placed in various positions on the body. Data is displayed in a control room where a sleep technologist monitors patients during the night. Once all of the data is collected a report is given to the sleep physician for review and interpretation.

What are some of the reasons for a sleep study?

Sleep studies are performed for various reasons:

- Sleep Apnea or Narcolepsy;
- Nocturnal seizures;
- Sleep walking;
- Restless leg syndromes;
- Daytime fatigue, increased irritability;
- Apnea induced insomnia.

What is the procedure for having a sleep study?

Sleep study procedures vary depending on the type of sleep study that is ordered. There is no pain involved with a sleep study. Patients are led to their own private room where they are instructed to get ready for their sleep study. Patients are asked to bring their most comfortable sleeping attire. Hospital gowns/scrubs are available if needed. Patients are also encouraged to bring their own pillow for comfort.

Once the patient is dressed for bed the technician will go over the necessary paperwork and begin the process. There are various electrodes that are taped to the face, neck, legs, chin and shoulders. Some electrodes are placed on the head with a paste like material. Although it may look obtrusive, patients are able to move freely once in bed.

Once the hook-up is complete and the patient is ready for bed the technologist will turn out the lights and begin the recording in the control room. Patients are asked to complete a few simple tasks such as opening their eyes and closing them. These exercises are done to check the integrity of the recording electrodes. After all of the pre-test calibrations are complete you will hear a verbal "good night" and the test is officially underway. The recording time will be a minimum of six hours.

If the patient is a minor or additional testing such as a Multiple Sleep Latency Test is scheduled to follow the test may be recorded for up to eight hours.

Under certain circumstances you may be asked to wear a Continuous Positive Airway Pressure (CPAP) interface for the second half of your study. CPAP is the first line treatment for patients who have sleep apnea. CPAP uses room filtered air to splint the airway and keep it open and supported. It is extremely successful in treating obstructive sleep apnea. Quite often, due to time constraints, patients are required to return to the sleep lab for a follow-up study to conclude or initiate CPAP treatment.

Here are the criteria for qualifying for a split night study (all must be met):

- A minimum 120 minutes of sleep must be obtained in the first three hours of the study.
- A minimum of 40 respiratory events must be seen for every hour of sleep obtained during the first three hours. Giving an apnea/hypopnea index (AHI) of 40. AHI of 20 will qualify if desats are at or below 75%.
- Minimum 4 percent drop in oxygen saturation with each respiratory event.

Reasons for having to return to the sleep lab for follow up testing:

- A patient only has apnea while lying on their back (positional apnea).
- A patient only has apnea during a specific stage of sleep (stage specific apnea).
- Not enough sleep was captured in the first half of the study.
- Not enough definitive respiratory events were seen in the first half of the study.
- Not enough time remained to carry out a proper titration.
- Other conditions such as restless leg syndrome are present making event detection more difficult.
- It is not uncommon for a patient to return for an additional study with CPAP titration even if CPAP was applied during their first study. Time is limited and if a patient does not sleep well with CPAP on more time may be required to titrate towards the optimum pressure.

Once your study is complete the electrodes will be cleaned off. You will be free to go or you can stay and rest a bit longer if you wish.

Once the data is scored by the staff technologists it will be prepared for review by the sleep lab physician. Once reviewed a dictated version of the study will be sent to the referring physician who will discuss the findings and follow-up care with you. Sleep studies generally consist of over 800 pages of data. Your results should be sent to your physician in 5-10 days.

Preparations:

(Note to all patients): Avoid caffeine and napping on the day of your study. Please arrive with clean, dry hair. Refrain from using hair gels or oils. No skin lotions. Take regular medications unless instructed differently by your physician.

Outpatient Registration: Please call **(573) 458-7737** between the hours of 8 a.m. and 5 p.m. Monday thru Friday to pre-register for your appointment.

Your appointment, date and time:_____.