

INFORMATION REGARDING YOUR SLEEP STUDY

What is a Polysomnogram? A polysomnogram is a diagnostic sleep study that measures the quality of a person's sleep by measuring the body's involuntary functions during sleep, such as breathing and heartbeat. Each study will differ somewhat depending upon the individual patient's circumstances. A typical polysomnogram records the following data:

- Brain waves (electrodes placed on the scalp)
- Eye movement (electrodes placed on the face, by the eyes)
- Chin muscle tone (electrodes placed on or under the chin)
- Heart rate (electrodes placed on the chest)
- Leg movements (electrodes placed on the legs)
- Breathing (breathing sensor placed near the nose and mouth)
- Breathing effort (two small belts placed loosely around the chest and abdomen)
- Oxygen level (small sensor attached to the finger)
- Audio and video taping

Why is it necessary to measure and record these different functions? During sleep, the body functions differently than when we are awake. Disturbed sleep such as irregular breathing, limb movements or lack of sleep consolidation can interfere with daytime activities, cause daytime sleepiness and cause serious health problems. These tests help us know exactly what is happening to the body during sleep.

Will I be able to sleep with all those sensors on? Probably. Most people sleep reasonably well during sleep studies, so that we can obtain a reliable sample of the individual's sleep pattern. The sensors are applied so that you can move in your sleep, change body positions while in bed, and use the bathroom. The sleep rooms are set up like normal, comfortable bedrooms, and our staff makes the environment as comfortable as possible. Patients can control the bedroom's temperature themselves.

Will the sensor devices or tests hurt? No. This is a painless and non-invasive (no needles) testing procedure.

What is a multiple sleep latency test (MSLT)? A multiple sleep latency test is given during the daytime. The MSLT test usually follows an all-night sleep study. The MSLT test consists of a series of 20-minute naps, during which the patient tries to fall asleep. The test is given every two hours throughout the day, with each nap lasting about 20 minutes. During each nap, sensors and electrodes record data on body functions (heartbeat, breathing, eye movement, etc.). If you are scheduled for an MSLT test following your all-night sleep study, please bring something to read, work on or watch during the day to help keep you occupied between naps. In order for the testing to be accurate, patients must remain awake between naps. A TV is provided in each room. The MSLT testing is usually completed between 5:00 and 6:00 p.m. on the day following the all-night sleep study.

What is a maintenance of wakefulness test (MWT)? The maintenance of wakefulness test is given during the daytime. The MWT usually follows an all-night sleep study. The MWT consists of a series of 40-minute trials, during which the patient tries to stay awake. The test is given every two hours throughout the day, with each trial lasting about 40 minutes. During each trial, sensors and electrodes record data on body functions (heartbeat, breathing, etc.) If you are scheduled for an MWT test following your all-night sleep study, please bring something to read, work on or watch during the day to help keep you occupied between trial periods. In order for the testing to be accurate, patients must remain awake between trials. A TV is provided in each room. The MWT testing is usually completed between 5:00 and 6:00 p.m. on the day following the all-night sleep study.

What is a CPAP titration study, and why did my doctor order this test? CPAP stands for continuous positive airway pressure. Nasal CPAP therapy is a non-invasive, non-surgical way to treat obstructive sleep apnea.

When a patient comes into the Sleep Center to be titrated on nasal CPAP, he or she is fitted with a relatively small, comfortable mask that goes over the nose only. This mask is hooked up to a CPAP unit, which delivers an air pressure through the nose into the back of the airway to splint the airway open during sleep with air. Initially, the CPAP unit uses a low air pressure that allows patients to breathe easily in and out against the slight pressure. When the patient is asleep, the pressure is adjusted (titrated) to keep the back of the airway open during sleep. Pressure is titrated to keep the patient apnea-free in all stages of sleep and in all body positions. The CPAP allows the patient to achieve restful and deep sleep without interruption during the night. Patients with sleep apnea not only get a good night's sleep on CPAP therapy, but also prevent long-term damage to their heart and body that could be caused by lack of oxygen and poor sleep.

What is obstructive sleep apnea? Obstructive sleep apnea occurs when the airway closes, collapses or becomes blocked during sleep. This closing or obstruction of the airway prevents the flow of air and oxygen to the lungs and body. Obstructive sleep apnea is caused when tissue and structures in the back of the throat and airway relax or collapse during sleep. To compensate for insufficient airflow, the individual will make increased efforts to breathe and eventually will wake up – either partially or completely – to open the airway and take a breath. Individuals with obstructive sleep apnea may stop breathing hundreds of times per night, which severely interrupts their sleep. Poor sleep at night can show its effects during the day, as people have difficulty functioning, are less alert, and are more prone to

accidents. Obstructive sleep apnea also can lead to health complications, such as high blood pressure, heart damage, heart attack and stroke.