

## Sleep Studies performed at Mary Washington Sleep Disorders Center

### **Polysomnography (sleep study):**

A polysomnography (PSG) is a test used to diagnose different sleep disorders. Various measuring devices are used to assist with the diagnosis. There is no pain and there are no needles.

The PSG will measure:

- EEG (electroencephalograph): wires are attached to the head to help evaluate brain waves and determine stages of sleep.
- EOG (electrooculograph): wires are attached by each eye to monitor eye movement.
- EMG (electromyography): electrodes attached to the legs to monitor leg movements.
- EKG (electrocardiograph): electrodes are attached to measure heart rate and rhythm.
- Sensor used to monitor breathing from the nose and the mouth.
- Belts placed around the chest and abdomen to measure breathing effort.
- Pulse oximeter placed on the finger to monitor oxygen level.

These wires are attached to a small control monitor. Patients are able to move around in the room with these on, change sleep position and be able to get up in the middle of the night if needed.

### **CPAP (Continuous Positive Airway Pressure) Titration**

Once it is determined that a patient has sleep apnea, he or she is given a CPAP mask and machine to assist with breathing. The mask is applied to either the nose or the nose and mouth with air flowing into it while the patient sleeps. All of the measuring devices used during the PSG study are used to assist in monitoring the effectiveness of the CPAP. The CPAP will start at a low pressure and will gradually be increased to a therapeutic level, which has eliminated the obstructive sleep apnea.

### **Split Night Study**

Split night studies are both a polysomnography study in the beginning of the night, and a CPAP titration during the latter portion of the night. The polysomnography portion will determine if the patient has obstructive sleep apnea, then the CPAP is started to determine the therapeutic pressures. This study requires that certain criteria be met in order to start the CPAP portion of the study. This criterion is based on the American Association of Sleep Medicine and Medicare guidelines.

### **Multiple Sleep Latency Test (MSLT)**

MSLT is used to study the level of daytime sleepiness and assist in the diagnosis of idiopathic hypersomnia. During this test, the patient is monitored with devices described in the polysomnography section. The patient takes a series of naps (usually 20 minutes) throughout the day. The technician will then wake up the patient and make sure he or she doesn't sleep in between naps. This study starts at 6 am and ends after 5 pm.