

**OLIVE VIEW-UCLA MEDICAL CENTER
RESPIRATORY CARE SERVICES – SLEEP MEDICINE
POLICY & PROCEDURE**

**NUMBER: 8874
VERSION: 2**

SUBJECT/TITLE: ADULT POLYSOMNOGRAPHY PROTOCOL

POLICY: The diagnostic portion of the split night sleep study should be performed according to the **AASM Practice Parameters for the Indications for Polysomnography and Related Procedures: An Update for 2016**. Please refer to the Protocol for Polysomnography for the indications and procedures. Application of electrodes, montages, filters, sensitivities, and scoring will be performed according to the **AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specifications**.

PURPOSE: Polysomnographic studies are performed on patients to diagnose a variety of sleep disorders when ordered by a sleep staff physician, or by another physician with the approval of a sleep staff physician.

Possible indications for polysomnography include:

- Sleep-related breathing disorders
- Continuous positive airway pressure (CPAP) titration in patients with sleep-related breathing disorders
- Prior to a multiple sleep latency test in the evaluation of suspected narcolepsy
- In evaluating sleep related behaviors that are violent or otherwise potentially injurious to the patient or others
- Certain atypical or unusual parasomnias
- Neuromuscular disorders and sleep related symptoms
- To assist in the diagnosis of paroxysmal arousals or other sleep disruptions thought to be seizure related
- In a presumed parasomnia or sleep related seizure disorder that does not respond to conventional therapy
- When there is a strong clinical suspicion of periodic limb movement disorder.

DEPARTMENTS: RESPIRATORY CARE SERVICES

PROCEDURE:

- 1.0 Recorded Parameters:
 - 1.1 Central Monopolar
 - 1.2 Occipital Mono- or Bipolar Recording

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- 1.3 Chin EMG
- 1.4 R/LAT and L/LAT
- 1.5 ROC and LOC
- 1.6 Snoring MIC or SENSOR
- 1.7 Thermistor
- 1.8 Nasal/Oral Airflow
- 1.9 Thoracic Effort (Uncalibrated RIP belt)
- 1.10 Abdominal Effort (Uncalibrated RIP belt)
- 1.11 SaO₂
- 1.12 Body Position

2.0 Upon admission to the Sleep Lab, each patient will have an assessment completed by the Sleep Lab Technologist for data collection and to determine any immediate needs or concerns.

3.0 Admission assessment will include the following:

- 3.1 Review of demographic information
- 3.2 Reason for sleep study
- 3.3 Physiological parameters
- 3.4 Current medications
- 3.5 Environment - special needs of the patient (e.g., hearing aid, glasses, cane, interpreter)
- 3.6 Patient/family education
- 3.7 Discharge planning: Where? With whom?
- 3.8 Reminder to patient of follow-up appointment with referring physician

Step-by-Step Directions:

- 1.0 Have all equipment ready when patient comes into the room
- 2.0 Inspect all electrodes
- 3.0 Instruct patient to change into clothes to sleep in.
- 4.0 Have patient sit in the chair.
- 5.0 Explain procedure to patient.
- 6.0 Clean the site of each electrode on the patient before placement.
- 7.0 Fill each electrode cup with conductive paste.
- 8.0 Attach the EEG sensors and the ground (F3, F4, C3, C4, O1, O2, A1, A2).
- 9.0 Place the right oculogram electrode (EOC) above the midline of the right outer canthus.
- 10.0 Place the left oculogram electrode (EOC) under the midline of the left outer canthus.
- 11.0 Place chin EMG electrodes on the midlines of the mentalis and submentalis muscles.
- 12.0 Place, (Dual thoracic/abdominal RIP belts, uncalibrated), ventilatory effort bands above the breast bone and around the midline of the abdomen. Ensure there is a separation between the bands.
- 13.0 Attach the pulse oxymeter.

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- 14.0 Prep the patient's legs with alcohol for the EMG electrodes placement.
- 15.0 Place the EMG electrodes in area of the left and right anterior tibialis muscles. Secure electrodes with tape.
- 16.0 Place the airflow sensor (thermistor, nasal pressure, end-tidal CO 2) directly in the path of the patient's airflow. Secure sensor with tape.
- 17.0 Tape the snore microphone/sensor on the left or right side of the Adams apple.
- 18.0 Connect all patient cables, headbox and oximetry probe.
- 19.0 Instruct patient to lay supine and very still, eyes open.
- 20.0 Perform bio and physical calibrations prior to lights out and after lights on while recording.
- 21.0 Review data for artifacts, change electrodes/sensors as needed.
- 22.0 If all night CPAP titration is ordered, fit patient with mask and begin CPAP therapy. See CPAP Titration policy and procedure.
- 23.0 Instruct patient that he/she may watch TV or read until lights out.
- 24.0 If patient wants to go to sleep, lights are turned off.
- 25.0 Begin testing.
- 26.0 Enter tags into computer; lights out, body position, etc. every 30 minutes and as needed.
- 27.0 Studies will be interpreted by physicians who are board certified in sleep medicine.

References:	
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