

**HACKETTSTOWN REGIONAL MEDICAL CENTER  
CARDIO PULMONARY POLICY MANUAL  
ELECTROENCEPHALOGRAM (EEG)**

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**Effective Date: February 2000**  
**Cross Referenced:**  
**Reviewed Date: 02/16**  
**Revised Date: 02/16**

**Policy No: 8B.009**  
**Origin: Cardio Pulmonary**  
**Authority: Cardio/Pulmonary Manager**  
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**Purpose:** An EEG is used as a diagnostic tool to measure and record the electrical activity of the brain utilizing non invasive sensors. An electroencephalogram (EEG) can help diagnose, monitor or rule out conditions such as:

- Epilepsy
- Brain Tumor
- Brain Injury
- Cerebral Palsy
- Stroke
- Drug overdose
- Sleep disorders
- Herpes Simplex
- Encephalitis (brain inflammation)
- Liver and kidney disease
- Brain death

**Resources:**

1. Grass Technologies Twin System (EEG computer)
2. Electrodes
3. Alcohol wipes
4. Skin preparation gel
5. Elefix Paste
6. EEG log book
7. Cotton tipped applicator
8. Square gauze pieces

**Personnel:**

1. Cardiology Technician
2. Panel Neurologist to interpret EEG and dictate the final report.

**Procedure:**

**To Perform an EEG**

1. Introduce yourself to the patient and confirm patient by asking for two identifiers i.e.: first and last name, spelling of the last name, and date of birth.
2. Confirm written order is correct. (Script or Order in Cerner)
3. Double click on the “Explorer Database” icon on the EEG computer.
4. Log in with Username and Password.
5. Click on the “File” icon. Click on “New Patient” to add a new patient to the database.
6. Enter patient information including:
  - a. Name
  - b. Birth date
  - c. Gender
  - d. ID type (provided by the EEG log book)
  - e. Referring Physician (doctor who ordered the test)
  - f. Medical Record number
  - g. ID (Financial Identification number)
7. Click Save.

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8. Click on the red Record button to start the monitoring mode. (A Not Recording reminder is displayed in the middle of the screen while monitoring.)
9. Click the Calibration icon to verify that the amplifier is calibrating properly.
10. Click on the Impedance icon to check the impedance values on the electrodes. Click Z-check. All electrodes will be highlighted blue.
11. Attach electrodes to the patient following the attached diagram. Prep each area using skin prep gel and attach electrode using Elefix paste covered with a square gauze piece.
12. When all electrodes are attached, click on the Impedance icon. Click Z-check to check the impedance values on the electrodes. All electrodes should be highlighted white. If any are highlighted blue, remove the electrode from the patient, prep area again and reapply. Check impedance values again until all are highlighted in white.
13. Click on red Record button to start the recording.
14. Right-click on the montage Explorer icon on the toolbar to view a list of available montages. Left-click on the montage in the list to change the montage.
15. Complete the Biocal montage for one minute.
16. Record Montages I-V for three (3) minutes each. Instruct the patient to keep their eyes open for the first half of each montage (1 ½ minutes) and closed for the last half of each montage (1 ½ minutes). Place a notation in the study by pressing the space bar and typing the notation.
17. For a hyperventilation EEG study, instruct the patient to hyperventilate while running Montage VI.
18. For a Photic Stimulation EEG study, instruct the patient to keep their eyes closed. Place the light from the EEG computer approximately 6 inches from the patient's face. Start Montage VII and click the light bulb icon.
19. Allow Montage to cycle through to completion.
20. To end the study, click on the red record button.
21. Click on the yellow note pad icon and type a notation including the following information: the test and montages completed, the patient's status (cooperative, awake, asleep, agitated, etc.) and any other notes that may be helpful to the neurologist reading the study.
22. Click on the lower X in the upper right-hand corner to close the first window.
23. Choose NO when asked "Would you like to continue the same record on the next session?" This will formally stop and close the recording.
24. Click Refresh.
25. Left click next to the patient's name.
26. Right click on EEG.
27. Click on Quick Copy.
28. The following prompt will appear-  
The copy of file "patient\_name-123456.000" was successful. Would you like to delete the original file?
29. Left click "No"
30. Proceed to the Dictation room. Log onto the Review Station computer.
31. Two file names will show under patient's name. \*NOTE\* Both studies will have the same date.  
-\\HRMCRESPCOMET1\\Twin\_Data\patients\_name-123456.000  
-\\hrmcmsfp01\ekgdb\Twin\_Data\patients\_name-123456.000
32. Determine which study has which file name. Load the study labeled-  
-\\HRMCRESPCOMET1\\Twin\_Data\patients\_name-123456.000  
And right click
33. Left Click on Remove. When instructed with prompt-  
- Are you sure you want to remove the selected Study from the Database?

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34. Left Click Yes
35. When instructed with prompt-  
- Do you want to delete all data files from this study?
36. Left click No
37. Obtain a face sheet for the patient from Cerner. Write the name of the study done and the date on the top. Place the face sheet in the folder labeled "To Be Read" in the Dictation Room.
38. Clean all wires with soap and water.
39. Charge the EEG in Cerner by entering the order for the test done. Check the task (for inpatients only) off the Multipatient Task List.