How to Set Up Continuous EEG (CEEG)

OBTAIN SUPPLIES

1. EEG module (yellow)
2. EEG cable with wires
3. NuPrep™ cream and a face cloth
4. Paediatric electrodes (use new package)
STORING

Location
All supplies including electrodes, NuPrep, module and leads are in Bay 1 supply room.

After use, slide the two white bars at each end of the electrodes as close to the hub and clips as possible. Let cleaners know to leave these bars in this position when they clean the bedside.

This will keep the leads from becoming tangled. Store on hooks in the South West corner of the Bay 1 supply room.
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OBTAIN SUPPLIES

1. EEG module (yellow)
2. EEG cable with wires
3. NuPrep™ cream and a face cloth
4. *Paediatric electrodes (new package)*
   repositionable electrodes 2660-3
Prepare Skin

1. Wet a washcloth with warm water (no soap, cleanser or alcohol) and scrub skin along hairline and behind ears.
2. Rub vigorously with a dry washcloth or towel (to remove residue and roughen epithelial cells).
3. Rub a small amount of Nuprep* into the skin on all areas where electrodes will be applied.
4. Remove all traces of Nuprep with a dry washcloth.

*Mild abrasive gel that reduces impedance, improves conductivity and reduces artifact.
Confirm that the Color Sequence Matches
(this is the new sequence effective May 1, 2018)

The black reference electrode is on this side.
Apply Electrodes (diagram next page)

- Apply electrodes just below hair line (sub-hairline); leave enough space to ensure electrode is not in patient’s hair which will reduce contact
- Avoid pressing on the centre of the electrode (this can cause a loss of conducting gel)
  1. Place one sub-hairline electrode in the centre of the sub-hairline
  2. Place one electrode in front of each ear
  3. Place one electrode over each temple
  4. Place one electrode between the centre electrode and the temple electrode on each side
  5. Place one electrode behind each ear
Electrode Placement
Identify the CEEG Lead Colors
Connect Electrode to Match Colors as Shown

Right: Even Numbers
Left: Odd numbers

Montage A: Long bipolar (standard lead in critical care)
Monitoring Should Begin Immediately

Monitoring should begin immediately.

If monitoring doesn’t begin immediately, make sure that the module is pushed in a connecting to the back of the rack.

If monitoring still doesn’t begin, press on the “xylophone” key at the bottom right of the screen and enable the EEG module.
Touch the change screen and select the EEG waveform. The 4 waves will be displayed as shown here.
You return to the Dynamic Waves screen if you do not want all waves displayed. You can also choose to change the number of waves continuously displayed. Monitoring continues in the background.
From the smart keys at the bottom, select the next page until you find the EEG setup menu.

The monitor automatically detects whether there are 2 (4 montage) or 4 wave (8 montage).
The default montage is “Long Bipolar”.

This is the standard montage for critical care.

The other montages are setup and used by Neuro Critical Care.
Electrode codes are as follows:
- Even numbers right side
- Odd numbers left side
- F (frontal)
- P (parietal)
- Fp (frontal polar)
- T (temporal)
- O (occipital)
- A (“zero” or electrode on midline)
- C (centre)

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>EEG1+</td>
<td>Fp1</td>
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<tr>
<td>EEG1-</td>
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<tr>
<td>EEG4-</td>
<td>T6</td>
<td>2kOhm</td>
</tr>
</tbody>
</table>
**Impedance:**

- Measures electrode-to-skin impedance continuously
- Individual electrode impedance is shown in the lower table
- Impedance measurements require that at least 2 electrodes and a reference electrode must be connected. This electrode relationship is shown by the straight lines in the diagram and in the upper table.
Impedance Code:

- ✔ impedance within range (< 5 kOhm)
- ✗ electrode disconnected
- ↑ impedance above limit
- ? noisy signal
Checking Impedance:

Use the diagram and table to identify the electrode that requires attention (Example: T6 is > 5).

Re-prep the skin and apply a new electrode. Ensure that the lead is secure within the cable.

If this does not correct the problem, change the “partner electrode”. This is identified by the colored line in the diagram (purple for this example). It can also be identified in the Impedance Limit (the two leads required for EEG channel 4 in this example is F8 and T6.)
You can return to the Dynamic Waves screen if you do not want EEG continuously displayed. You can also choose to change the number of waves being displayed. Monitoring will still continue in the background and the waves will be available in full disclosure from the central station.
To stop displaying any wave, touch on the waveform and choose “Change Wave”.
To stop displaying any wave, touch on the waveform and choose “Change Wave”.
Choose the wave you want to remove. “Wave 6” is the 6th waveform on the screen starting with the ECG. In this example, the 6th wave is EEG3.
Arrow up or down until you see “Blank”. This will turn the display off. Monitoring of this wave will continue in the background.
If you want to return to the full 4 wave display, go to Change Screen and choose EEG.

Notice the EEG*. This is a modified version of the EEG screen. For example, if you had turned 2 of the 4 EEG waves off, this would be your modified screen.

You can go back and forth between the default EEG screen (EEG) and the modified screen (EEG*).
Unsupported LAN

HR: 110 bpm
ART: 150 mmHg
PAP: 28/15 mmHg
EEG1: 100 μV
EEG2: 100 μV
EEG3: 100 μV
EEG4: 100 μV
NBP: 120/80 mmHg

Alarm: 7:34