

Neurology Resident Routine EEG Education (Apr 2022)

Introduction

The purpose of this study is to craft a list of routine EEG findings every adult and pediatric neurology resident should be able to independently identify upon graduation. Such a list will be instrumental in improving education milestones for these trainees as well as delineating further EEG education efforts.

Please select below all routine EEG findings (normal and abnormal) you believe every adult and pediatric neurology resident should learn how to accurately and reliably identify during residency training.

* 1. What is your name?

* 2. What is your email address?

* 3. Do you practice in an academic setting or private practice?

- ☐ Academic
- ☐ Private practice
- ☐ Both

* 4. How many years have you been reading EEGs (including during clinical neurophysiology and/or epilepsy fellowship training, if applicable)?

Neurology Resident Routine EEG Education (Apr 2022)

Normal routine EEG findings

* 5. How important is that every adult & pediatric neurology resident can independently identify each of the following normal routine EEG findings/patterns upon residency graduation?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Awake, adult posterior dominant rhythm (PDR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Awake, pediatric posterior dominant rhythm (PDR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drowsiness, slowing of the posterior dominant rhythm (PDR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drowsiness, slow roving lateral eye movements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drowsiness, diffuse irregular delta-theta slowing of the background	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 1/2 sleep, vertex waves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 1/2 sleep, positive occipital sharp transients of sleep (POSTS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2 sleep, sleep spindles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 2 sleep, K complexes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stage 3/4 sleep, diffuse irregular delta slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rapid eye movement (REM) sleep, erratic eye movements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rapid eye movement (REM) sleep, sawtooth waves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Neurology Resident Routine EEG Education (Apr 2022)

Routine EEG normal variants

* 6. How important is that every adult & pediatric neurology resident can independently identify each of the following routine EEG normal variants upon residency graduation?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Slow alpha variant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fast alpha variant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lambda waves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mu rhythm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posterior slow waves of youth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased frontal beta activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hyperventilation-induced slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Photic driving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Photomyogenic response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hypnopompic hypersynchrony	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hypnagogic hypersynchrony	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frontal arousal rhythm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fronto-central rhythm (texting rhythm)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wickets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Small sharp spikes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rhythmic mid-temporal theta of drowsiness (RMTD)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Midline central theta (Ciganek rhythm)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6 Hz phantom spikes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14-and-6-Hz positive spikes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subclinical rhythmic electrographic discharges in adults (SREDA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slow fused transient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occipital needle-like spikes of blindness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Temporal slowing of the elderly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Neurology Resident Routine EEG Education (Apr 2022)

Routine EEG artifacts

* 7. How important is that every adult & pediatric neurology resident can independently identify each of the following routine EEG artifacts upon residency graduation?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Myogenic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eye blinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lateral eye movements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eye fluttering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nystagmus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lateral rectus spikes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glossokinetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chewing/bruxism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EKG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sweat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electrode pop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60-/50-Hz artifact	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respiration/breathing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Neurology Resident Routine EEG Education (Apr 2022)

Abnormal routine EEG findings

* 8. How important is that every adult & pediatric neurology resident can independently identify each of the following abnormal routine EEG findings upon residency graduation?

	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Abnormal posterior dominant rhythm (PDR), slow for age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abnormal posterior dominant rhythm (PDR), asymmetric	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asymmetric sleep spindles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diffuse irregular/polymorphic slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diffuse regular/rhythmic slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal irregular/polymorphic slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal regular/rhythmic slowing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal epileptiform discharge, sharp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal epileptiform discharge, spike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal epileptiform discharge, polyspike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generalized epileptiform discharge, 3 Hz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generalized epileptiform discharge, <2.5 Hz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generalized epileptiform discharge, 3-5 Hz, polyspike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Focal seizure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generalized seizure, absence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generalized seizure, tonic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infantile spasm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hypsarrhythmia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 9. How did you make your selection in the previous questions as to what normal and abnormal routine EEG findings every adult & pediatric neurology resident should be able to independently identify upon graduation? (Select all that apply)

- ☐ I selected finding(s) that, if misread, could result in additional unnecessary tests (such as additional EEGs and/or neuroimaging)
- ☐ I selected finding(s) that, if misread, could result in unnecessary treatments (such as antiseizure drug therapy)
- ☐ I selected finding(s) that, if misread, could result in epilepsy misdiagnosis
- ☐ Other (please specify)