Abnormal movements in newborn baby

Seizure activity

Clonic

· Repetitive muscle contraction

Tonic

Sustained muscle contraction

Myoclonic

• Brief active muscle contraction (s)

Automatisms

- Orolingual
- Mouthing/chewing
- Tongue movements
- Crying
- Yawning
- Noises or vocalisation
- o Dry retching
- Ocular
 - o Opening
 - o Flickering
 - Deviation
- Nystagmus
- Limb movements
- Pedalling
- o Swimming
- o Rowing
- o Boxing jabs

Epileptic spasms

- o Sudden flexion or extension
- Grimacing, head nodding, subtle eye movements

Autonomic

- Cardio-pulmonary
 - Colour change
- Sigh/grasp/breathing change
- Oxygen saturation reduces
- o Apnoea
- o HR change > 10 bpm
- BP increase or decrease
- Pupillary
- Gastrointestinal
- Sudomotor
- Vasomotor
- Thermoregulatory

Behavioural arrest

- Motionless/marked reduction in activity
- Staring

Sequential

• Sequence of signs, symptoms and EEG changes

Unclassified

Features not usual to other categories

Non-seizure activity

- Jitteriness
- Excessive startles
- Benign neonatal sleep myoclonus
- Tremors
- Clonus

Jitteriness versus seizures		
Clinical features	Jitteriness	Seizures
Abnormal gaze/ eye movement	No	Yes
Predominant movement	Tremor, rapid, oscillatory	Repetitive clonic, jerking, tonic
Movements cease with passive flexion	Yes	No
Stimulus provoked movement	Yes	Maybe
Conscious state/ autonomic change	Awake or asleep	Altered

Abbreviations: BP: blood pressure, EEG: electroencephalogram, HR heart rate, > greater than

Queensland Clinical Guideline: Neonatal seizures. Flowchart version: F22.23-3-V2-R27

