Neurology Exam (consider age, in infants consider testing primitive reflexes)

- Mental Status/Speech
    - i.e. awake, alert F/M, fluent w/o aphasia, dysarthria, following commands easily, oriented, aware of surroundings
- Cranial Nerves
    - CN II – Look at optic discs (sharp, blurry, pale?), check pupillary light reflex (w/CN III), visual fields, visual acuity
    - CN III, IV VI – extraocular movements (w/wo nystagmus, strabismus)
    - CN V – facial sensation (V1-V3), corneal reflex (afferent), and bite down
    - CN VII – facial strength (smile, eyebrow raise, eyelid closure, puff cheeks bilaterally), taste
    - CN VIII – check hearing (finger rub)
    - CN IX/X – palate elevation (symmetric or not), gag
    - CN XI – should shrug or lateral head movements
    - CN XII – tongue protrusion/strength
- Motor Exam
    - Tone (hypo/hypertonic), bulk (increased, atrophy), strength, and abnormal movements
    - 0/5 – no movement, 1/5 = flicker of movement, 2/5 = movement in horizontal plane, 3/5 = movement against gravity, 4/5 = movement easily overcome by examiner, 5/5 = full strength against resistance
    - Full motor strength exam includes:
        - Deltoids, triceps, biceps, hand intrinsics, grip, iliopsoas, quadriceps, hamstrings, anterior tibialis, gastrocnemius, pronator drift
- Sensory Exam
    - Pinprick, light touch, vibration, proprioception (distal joint, Romberg), temperature
- Coordination/Cerebellar Exam
    - Finger to nose, heel to shin, rapid alternating movements, tandem gait
        - Asses for slowing/dysmetria/tremor
- Reflexes – make sure patient is relaxed
    - 0 = absent, 1 = diminished (require reinforcement/distraction), 2 = normal, 3 = brisk (w/spread), 4 = brisk with clonus
    - Test biceps, triceps, brachioradialis, quadriceps, gastrocs
    - Babinski: test toes reaction to stroking sole of feet (upgoing vs downgoing)
- Gait
    - Typical gait – running may unmask subtle asymmetries and help assess functional gait
    - Toe walk/heel walk – strength
    - Tandem – cerebellar function

Neurology Localization Review

Anatomical Level	Features
Cortical brain	Aphasia/visuospatial deficits, face/arm involved, agraphia, no visual problem, hyperreflexia/hyperreflexia, could have seizures
Subcortical brain	Involvement of face/arm/leg; alteration in pain/touch/temperature/position; visual field deficits, involuntary movements (chorea/dystonia), hyperreflexia/hypertonia
Brainstem	Cranial nerve abnormality w/crossed signs; hemiparesis/hemiplegia; hypertonia, hyperreflexia
Cerebellum	Abnormal coordination; ataxia, difficulty w/tandem; tremor w/movement; dysdiadochokinesia; dysarthria, dysphagia, nystagmus
Spinal Cord	Sensory level, band of sensory change; distal symmetric weakness, bowel/bladder dysfunction, hyperreflexia/hypertonia
Root/Radiculopathy	Pain; proximal/distal weakness (asymmetric); atrophy w/fasciculation, normal tone/hypotonia, hyporeflexia
Peripheral nerve	Asymmetric reflexes, decreased pinprick/vibration; atrophy w/fasciculations; normal tone/hypotonia
Neuromuscular junction	Fatigability which worsens w/activity, proximal muscle weakness, no sensory loss, normal tone, normal reflexes, normal muscle bulk
Muscle	Symmetric, proximal weakness; normal tone, normal/hyporeflexic, normal sensation